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THE

LELAND STANFORD JUNIOR UNIVERSITY

CIRCULAR OF INFORMATION
NO. 6

PALO ALTO, CALIFORNIA
PUBLISHED BY THE UNIVERSITY
DECEMBER, 1891

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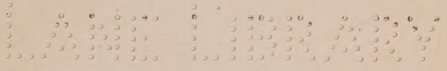

PALO ALTO, CALIFORNIA
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LANE LIBRARY

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DIRECTORY.

[The rooms in the Quadrangle are numbered consecutively beginning at the left of the main entrance, ten numbers being allotted to each building.]

The office of the *President* is room 112.
The office of the *Registrar* is room 110.
The *Library* is in room 2.

44566

UNIVERSITY CALENDAR.

1891.

Sept. 28	Monday . . .	Entrance Examinations begin.
Oct. 1	Thursday . . .	Registration Day.
Oct. 2	Friday	Instruction begins.
Nov. 26 – Nov. 29	Thursday – Sunday . .	Thanksgiving Recess.
Dec. 21	Monday	Christmas Vacation begins.

1892.

Jan. 3	Sunday	Christmas Vacation ends.
Jan. 30	Saturday . . .	First Semester ends.
Feb. 1	Monday	Registration.
Feb. 2	Tuesday . . .	Second Semester begins.
Feb. 22	Monday	Washington's Birthday.
April 10 – April 17	Sunday – Sunday . . .	Easter Vacation.
May 14	Saturday . . .	Memorial Day.
May 30	Monday	Decoration Day.
June 9 – June 11	Thursday – Saturday . .	Entrance Examinations at Palo Alto and other places.
June 12	Sunday	Baccalaureate Sermon.
June 13	Monday	Class Day.
June 15	Wednesday . .	Commencement.

Sept. 5	Monday	Entrance Examinations begin.
Sept. 6 – Sept. 7	Tuesday – Wednesday .	Registration of Matriculated Students.
Sept. 8	Thursday . . .	Registration of New Students.
Sept. 9	Friday	Instruction begins.

1893.

May 31	Wednesday . .	Commencement.

FOUNDERS.

LELAND STANFORD. JANE LATHROP STANFORD.

BOARD OF TRUSTEES.

The Hon. JAMES MCM. SHAFTER . . . . . San Francisco
The Hon. CHARLES GOODALL . . . . . San Francisco
The Hon. ALFRED L. TUBBS . . . . . San Francisco
The Hon. FRANCIS E. SPENCER . . . . . San Jose
The Hon. JOSEPH B. GRANT . . . . . San Francisco
Col. CHARLES F. CROCKER . . . . . San Francisco
Mr. TIMOTHY HOPKINS. . . . . San Francisco
Mr. HENRY L. DODGE . . . . . San Francisco
Mr. S. F. LEIB . . . . . San Jose
Mr. IRVING M. SCOTT . . . . . San Francisco
Dr. H. W. HARKNESS . . . . . San Francisco
The Hon. HORACE DAVIS . . . . . San Francisco
The Hon. JOHN BOGGS . . . . . Colusa
The Hon. T. B. MCFARLAND . . . . . Sacramento
The Hon. ISAAC S. BELCHER . . . . . San Francisco
The Hon. JOHN Q. BROWN . . . . . Sacramento
The Hon. GEORGE E. GRAY . . . . . San Francisco
The Hon. N. W. SPAULDING . . . . . Oakland
The Hon. MATTHEW P. DEADY . . . . . Portland, Ore.
The Hon. WILLIAM M. STEWART . . . . . Virginia City, Nev.
The Hon. STEPHEN J. FIELD . . . . . Washington, D. C.
The Rev. HORATIO STEBBINS, D. D. . . . . San Francisco
Mr. LEON SLOSS . . . . . San Francisco
Dr. E. R. TAYLOR . . . . . San Francisco

FACULTY OF THE UNIVERSITY.

DAVID STARR JORDAN, LL. D., President of the University.

Escondite Cottage.

M. S., Cornell University, 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler University, 1878; LL. D., Cornell University, 1886. Instructor in Botany, Cornell University, 1871-72; Professor of Natural History, Lombard University, Illinois, 1872-73; Principal of the Appleton Collegiate Institute, Wisconsin, 1873-74; Student and afterwards Lecturer in Marine Botany, Anderson School at Penikese, 1874; Teacher of Natural History, Indianapolis, Ind., High School, 1874-75; Lecturer on Zoology, Harvard Summer School, Cumberland Gap, 1875; Professor of Biology, Butler University, 1875-79; Naturalist of the Geological Surveys of Indiana and Ohio, 1877; Assistant to the U. S. Fish Commission, 1877-91; Student of Ichthyology, British Museum, Museum d'Histoire Naturelle, etc., 1879-81; Professor of Zoology, Indiana University, 1879-85; Special Agent of the U. S. Census Bureau, Investigating Marine Industries of Pacific Coast, 1880; Lecturer on Comparative Anatomy, Indiana Medical College, 1885; President of Indiana University, 1885-91.

ANDREW DICKSON WHITE, LL. D., L. H. D., Non-Resident Professor of European History. *Ithaca, N. Y.*

A. B., Yale, 1853; A. M., 1856; Ph. D., University of Jena; LL. D., Michigan, Cornell, and Yale; L. H. D., Columbia College. Student at Berlin and Paris, 1853-56; Attaché of the American Legation at St. Petersburg, 1856; Professor of History and English Literature, University of Michigan, 1857-62; Member of the State Senate of New York, 1863-66; President of Cornell University and Professor of History, 1866-85; United States Commissioner to Santo Domingo, 1871; Chairman of the Jury of Public Instruction at the Centennial Exposition of 1876; Honorary Commissioner of the United States, and member of the Jury of Appeals, at the Paris Exposition of 1878; Envoy Extraordinary and Minister Plenipotentiary to the German Empire, 1879-81.

GEORGE ELLIOTT HOWARD, A. M., Professor of History.

8 Alvarado Row.

A. B., University of Nebraska, 1876; A. M., 1879. Student in History and Jurisprudence, Universities of Munich and Paris, 1876-78; Professor of History, University of Nebraska, 1879-91; Secretary of the Nebraska State Historical Society, 1885-91.

JOHN CASPER BRANNER, Ph. D., Professor of Geology.

B. S., Cornell University, 1882; Ph. D., Indiana University, 1885; Assistant Geologist to the Imperial Geological Survey of Brazil, 1875-78; Special Botanist for Thos. A. Edison in South America, 1880-81; Assistant on the Geological Survey of Pennsylvania, 1881; Special Agent of the U. S. Department of Agriculture for Investigating Cotton and the Insects affecting it in Brazil, 1882-83; Topograpical Geologist of the Geological Survey of Pennsylvania, Anthracite District, 1883-85; Professor of Geology, University of Indiana, 1885-91; Director of the Scranton, Pa., Summer School of Geology, 1886; State Geologist of Arkansas, 1887-92; Director of the Arkansas State Weather Service, 1887-89.

OLIVER PEEBLES JENKINS, Ph. D., Professor of Physiology and Histology. *Cedro Cottage.*

A. B., Moore's Hill College, 1869; A. M., 1872; M. S., Indiana University, 1886; Ph. D., 1889. Graduate student in Northwestern University, Harvard, Johns Hopkins, and Indiana. Teacher in the Public Schools of Indiana, California, and Wisconsin, 1870-76; Professor of Natural Science, Moore's Hill College, 1876-82; Professor of Natural Science, Indiana State Normal School, 1883-86; Professor of Biology, De Pauw University, 1886-91; some time engaged in Zoological Explorations of the U. S. Fish Commission in Virginia, Tennessee, North Carolina, South Carolina, in the Gulf of California, and in the Sandwich Islands.

JOHN HENRY COMSTOCK, B. S., Professor of Entomology. *7 Encina Hall.*

B. S., Cornell University, 1874. Instructor in Entomology, Cornell University, 1873-77; Assistant Professor, 1877-82; Lecturer on Zoology, Vassar College, 1877; U. S. Entomologist, at Washington, 1879-81; Professor of Entomology and General Invertebrate Zoology, Cornell University, since 1882.

MELVILLE BEST ANDERSON, A. M., Professor of English Literature. *159 Encina Hall.*

A. M., Butler University, 1877. Student at Cornell University, 1870-72; University of Göttingen, the Sorbonne, and the Collège de France, 1875-77; Professor of Modern Languages, Butler University, 1877-80; Professor of English Literature, Knox College, 1881-86; Professor of Literature and History, Purdue University, 1886-87; Professor of the English Language and Literature, University of Iowa, 1887-91.

JOHN MAXSON STILLMAN, Ph. D., Professor of Chemistry. *Alvarado Row.*

Ph. B., University of California, 1874; Ph. D., 1885. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry at Strassburg and Würzburg, 1875-76; Instructor in Organic and General Chemistry, University of California, 1876-82; Chemist of the Boston Sugar Refinery, 1882-92.

FERNANDO SANFORD, M. S., Professor of Physics. *2 Alvarado Row.*

B. S., Carthage College, 1879; M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood High School, 1888-90; Professor of Physical Science, Lake Forest University, 1890-91.

HENRY ALFRED TODD, Ph. D., Professor of the Romance Languages. *Hotel Vendome, San Jose.*

A. B., Princeton College, 1876; Ph. D., Johns Hopkins University, 1885. Fellow and Tutor in Modern Languages, Princeton College, 1876-80; Student at the Universities of Berlin, Paris, Rome, and Madrid, 1880-83; Instructor and Associate in Romance Languages, Johns Hopkins University, 1883-91.

CHARLES DAVID MARX, C. E., Professor of Civil Engineering.
9 Alvarado Row.

B. C. E., Cornell University, 1878; C. E., Karlsruhe Polytechnicum, 1881; Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U. S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University, 1884-90; Engineer Inspector of Public Improvements, Rochester, N. Y., 1886; Professor of Civil Engineering, University of Wisconsin, 1890-91.

JOSEPH SWAIN, M. S., Professor of Mathematics.
3 Alvarado Row.

B. L., Indiana University, 1883; M. S., 1885. Instructor in Mathematics and Zoology, Indiana University, 1883-85; Assistant U. S. Fish Commission, 1884; Professor of Mathematics, Indiana University, 1886-91; Student of Mathematics and Astronomy, University of Edinburgh, 1885-86.

ERNEST MONDELL PEASE, A. M., Professor of the Latin Language and Literature. *1 Alvarado Row.*

A. B., University of Colorado, 1882; A. M., 1885. Fellow in Johns Hopkins University, 1884-86; Instructor in Latin, Smith College, 1886; Professor of Latin, Bowdoin College, 1886-91.

HORACE BIGELOW GALE, B. S., Professor of Mechanical Engineering. *128 Encina Hall.*

B. S., Massachusetts Institute of Technology, 1883. Draughtsman and Designer of Machinery, with A. H. Metcalf, Pawtucket, R. I., 1882; Electrical Engineer, New England Weston Electric Light Company, 1883-86; Professor of Dynamic Engineering, Washington University, St. Louis, 1886-91.

CHARLES HENRY GILBERT, Ph. D., Professor of Zoology.
Francisquito Cottage.

B. S., Butler University, 1879; M. S., Indiana University, 1882; Ph. D., 1883. Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-88; Professor of Zoology, Indiana University, 1888-91; Assistant to the U. S. Fish Commission, 1880-91; Naturalist of U. S. Steamer Albatross, in exploration of the deep waters of the Pacific Coast, 1889-90.

DOUGLAS HOUGHTON CAMPBELL, Ph. D., Professor of Botany.
108 Encina Hall.

Ph. M., University of Michigan, 1882; Ph. D., 1886. Teacher of Biology, Detroit High School, 1882-86; Student at Bonn, Tubingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91.

EARL BARNES, M. S., Professor of the History and Art of Education.
4 Alvarado Row.

A. B., Indiana University, 1890; M. S., Cornell University, 1891. Graduate of Oswego (N. Y.) Normal School, 1884; Teacher of English and History, Hoboken German Academy, 1884-86; Special Student in History and Psychology, Cornell University, 1886-87, 88-89; Student in Pedagogics, University of Zürich, 1887-88; Professsor of History, Indiana University, 1889-91.

EDWIN HAMLIN WOODRUFF, LL. B., Librarian.
77 Encina Hall.

LL. B., Cornell University, 1888. Assistant, Astor Library, 1883-84; Chief Cataloguer, Cornell University Library, 1884-88; Instructor in English, Cornell University, 1888-90; Librarian of the Fiske Library, Florence, Italy, 1890-91.

THOMAS DENISON WOOD, A. M., M. D., Professor of Physical Training and Hygiene. *6 Alvarado Row.*

A. B., Oberlin College, 1888; A. M., 1891; M. D., College of Physicians and Surgeons, New York City, 1891.

ORRIN LESLIE ELLIOTT, Ph. D., President's Secretary and Registrar, and Acting Instructor in Economics. *10 Alvarado Row.*

Ph. B., Cornell University, 1885; Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86; Instructor in English, Cornell University, 1886-91; Assistant Registrar and President's Secretary, 1890-91.

JAMES OWEN GRIFFIN, Assistant Professor of German.
8 Alvarado Row.

Graduate of the Pennsylvania State Normal School, 1873; Teacher in Pennsylvania State Normal School, 1873-74; Principal Unadilla (N. Y.) Academy, 1874-79; Student at University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.), 1880-85; Instructor in German, Cornell University, 1885-91; Registrar, Cornell University, 1890-91.

GEORGE MANN RICHARDSON, Ph. D., Assistant Professor of Chemistry. *7 Alvarado Row.*

A. C., Lehigh University, 1886; Ph. D, Johns Hopkins, 1890. Student in Chemistry, Johns Hopkins University, 1886-88; Instructor in Quantitative Chemical Analysis, Lehigh University, 1888-89; Fellow in Chemistry, Johns Hopkins University, 1889-90; Instructor in Organic Chemistry, Lehigh University, 1890-91.

GEORGE HOLMES BRYANT, B. S., Assistant Professor of Mechanical Engineering, and Superintendent of the Shops.
6 Alvarado Row.

B. S., Massachusetts Institute of Technology, 1883. Director of Department of Mechanic Arts, Alabama Polytechnic Institute, 1885-91.

EDWARD HOWARD GRIGGS, A. M., Assistant Professor of Ethics, and Instructor in English. *5 Alvarado Row.*

A. B., University of Indiana, 1889; A. M., 1890; Instructor in English Literature, University of Indiana, 1889-91. Lecturer in English Literature in the Glenmore School of the Culture Sciences (N. Y.), 1891.

MARTIN WRIGHT SAMPSON, A. B., Assistant Professor of English.

A. B., University of Cincinnati, 1889; Instructor in English, University of Iowa, 1889-91; Assistant Professor of English Literature, University of Iowa, 1891.

ARTHUR GORDON LAIRD, Ph. D., Instructor in Greek.
82 Encina Hall.

A. B., Dalhousie College, 1889; Ph. D., Cornell University, 1891; Fellow in Classical Philology, Cornell University, 1889-91.

LOUIS ALEXANDER BUCHANAN, Instructor in Woodworking.
Menlo Park.

Pattern-maker and Model-maker, 1877-82; Student in Mechanical Engineering, Washington University, 1882-86; Instructor in Mechanical Drawing and Mathematics, Polytechnic Evening School, St. Louis, 1882-88; Practical Woodworker and Machine Designer, 1886-87; Draughtsman for the St. Louis Water Works Construction, 1887-89; Foreman of Construction, N. O. Nelson M'f'g. Co., 1890-91.

WILLIAM HOWARD MILLER, A. B., Instructor in Mathematics.
83 Encina Hall.

A. B., Johns Hopkins University, 1888. Graduate Scholar, Johns Hopkins University, 1888-89; Instructor in Preparatory School, Centreville, Md., 1889-91.

JOHN ANTHONY MILLER, A. B., Instructor in Mathematics.
5 Alvarado Row.

A. B., University of Indiana, 1890; Superintendent of Schools, Rockville, Ind., 1890-91.

ELLEN LOUISE LOWELL, Instructor in Physical Training.
40 Roble Hall.

Graduate of Sargent's Normal School of Physical Culture, Harvard University.

BOLTON COIT BROWN, M. P., Instructor in Freehand Drawing.
109 Encina Hall.

B. P., Syracuse University, 1885; M. P., 1889. Instructor in Freehand Drawing, Cornell University, 1885-88; Principal Fine Art Department, Government Art School, and Parkdale Art School, Toronto, 1889-90; Instructor in Art, Buchtel College, 1890-91.

SAMUEL JACQUES BRUN, B. S., Instructor in French.
48 S. Third Street, San Jose.

B.-ès-S., Montpellier, France, 1876. French Master, Ackworth School, England, 1879-80; Instructor in French, Haverford College, 1881-82; Instructor in French, Cornell University, 1882-86.

ALPHONSO GERALD NEWCOMER, A. M., Instructor in the Art of Writing. *35 Encina Hall.*

A. B., Michigan University, 1887; A. M., Cornell University, 1888. Instructor in Latin and French, Knox College, 1889-91.

CHARLES ELLWOOD COX, A. B., Acting Instructor in Mathematics.
College Park.

A. B., Haverford College, 1880. Principal of Friends Academy, Lewand, Iowa, 1880-85; Professor of Mathematics, University of the Pacific, 1886-91.

EDWARD THOMAS ADAMS, Acting Instructor in Drawing.
129 Encina Hall.

Practical Mechanic and Pattern-maker. Teacher of Drawing, Stockton Public Schools, 1890-91.

ELSA LOVINA AMES, Acting Instructor in Drawing. *Roble Hall.*

Student, College of Fine Arts, Syracuse University, 1888-92.

LUDWIG H. GRAU, Ph. D., Acting Instructor in German and Latin.

Ph. D., University of Munich, 1879. Student, Universities of Marburg and Halle, 1874-78; Instructor in Modern Languages, Royal College of Rothenburg, 1879-80; Professor of Modern Languages and Literature, Royal College of Mammingen, 1880-83; Teacher of Modern Languages, San Francisco and Oakland, 1885-92.

LECTURERS.

DANIEL KIRKWOOD, LL. D., Non-Resident Lecturer on Astronomy.
Riverside.

A. M., Washington College; LL. D., University of Pennsylvania. President of Delaware College, 1851-55; Professor of Mathematics, Indiana University, 1856-86.
Ithaca, N. Y.

JACOB GOULD SCHURMAN, D. Sc., Non-Resident Lecturer on Ethics.

A. B., University of London, 1877; A. M., 1878; D. Sc., University of Edinburgh, 1878. Gilchrist Scholar for Canada, 1875-78; University Scholar in Philosophy, University of London, 1877; Hibbert Traveling Scholar at the Universities of Heidelberg, Berlin, and Göttingen, 1878-80; Professor of Logic and Rhetoric, Acadia College, 1880-82; Professor of Philosophy and English Literature, Dalhousie College, 1882-86; Professor of Philosophy, Cornell University, since 1886, and Dean of the School of Philosophy, since 1891.

EMORY EVANS SMITH, Non-Resident Lecturer on Horticulture.
321 Market Street, San Francisco.

Editor of the *California Fruit Grower;* President of the State Florists' Club, etc.

OTHER OFFICERS.

BERT FESLER, A. B., Master of Encina Hall. *41 Encina Hall.*

MRS. LUCY STARK RICHARDSON, A. M., Acting Mistress of Roble Hall. *1 Roble Hall.*

CHARLES EDWARD HODGES, Resident Architect. *Menlo Park.*

THOMAS HENRY DOUGLAS, Forester. *Mayfield.*

HENRY B. SHACKLEFORD, Civil Engineer. *San Jose.*

RICHARD STEWART BRIGGS, Superintendent of Grounds. *Mayfield.*

CHARLES HENRY JOHNSON, Chief Engineer. *Palo Alto.*

GEORGE ADDERSON, Chief Steward. *202 Encina Hall.*

ORGANIZATION AND GOVERNMENT.

FOUNDATION OF THE UNIVERSITY.

The founding at Palo Alto of "a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree," was determined upon by the Hon. Leland Stanford and Jane Lathrop Stanford in 1884. In March of the year following the Legislature of California passed an Act providing for the administration of trust funds in connection with institutions of learning. November 14, 1885, the Grant of Endowment was publicly made, in accordance with this Act, and on the same day the Board of Trustees held its first meeting in San Francisco. The work of construction was at once begun, and the corner-stone laid May 14, 1887. The University was formally opened to students October 1, 1891.

NAME AND PURPOSE OF THE INSTITUTION.

The idea of the University, in the words of its founders, "came directly and largely from our son and only child Leland, and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University."

The object of the University, as stated in its Charter, is "to qualify students for personal success and direct usefulness in life"; and its purposes, "to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and incul-

cating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness."

LOCATION.

The University is located on the Palo Alto estate in the Santa Clara valley, thirty-three miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The estate consists of over eight thousand acres, partly lowland and partly rising into the foothills of the Santa Cruz range. On the grounds is the residence of the Founders, and an extensive and beautiful arboretum containing a very great variety of shrubs and trees.

ENDOWMENT.

The property conveyed to the University, in addition to the Palo Alto estate, consists of the Vina estate, in Tehama County, of fifty-five thousand acres, of which about four thousand acres are planted in vines, and the Gridley estate, in Butte County, of twenty-two thousand acres, devoted mainly to the raising of wheat.

BUILDINGS.

In arranging the buildings and grounds the plan has been to conform them to the peculiar climatic conditions of California and to provide for indefinite expansion without crowding or distortion. A series of quadrangles, to be erected as the needs of the University demand, will furnish facilities for all general University work. Surrounding these will be various detached buildings for miscellaneous purposes, and the University town, with carefully laid out streets and grounds.

Immediately facing the broad avenue leading directly from Palo Alto Station will be the Memorial Arch, eighty feet wide by eighty-five feet high, the open arch having a span of forty-six feet, and a sculptured frieze. Flanking this arch will be

the Library on the left, and the Natural History Museum on the right. These together will make a grand facade of about a thousand feet, forming one side of the outer quadrangle.

The inner quadrangle is reached through a triple arched entrance. Opposite the main entrance and occupying the center of the south side of the inner quadrangle will be the chapel. The other buildings of this quadrangle, twelve in number, are already completed. They are at present used for offices, lecture and recitation rooms, laboratories, and the library, and are connected by a continuous open arcade. The open space enclosed is five hundred and eighty-six feet long by two hundred and forty-six wide, and contains three and a quarter acres.

The buildings are of a buff sandstone, somewhat varied in color. The stonework is of broken ashlar with a rough rock face, and the roofs are covered with red tile. The architectural *motif* is to be found in the old Spanish Missions of California. The buildings of the inner quadrangle are of one story, and so arranged that while floors, walls, and roofs are permanent, the partitions can be readily changed if desired; the outer quadrangle will have the arcades on the outside, and the buildings are intended to be two stories high.

The grounds to the east and west of the central quadrangle have been reserved for six other quadrangles, three on either side. Behind the central quadrangle will be the workshops of the mechanical engineering department, the boiler and power houses, and the mechanical laboratories, of which the wood-working shops, foundry, and boiler house are now completed.

At a distance of a third of a mile on either side of the Memorial Arch, and fronting the broad avenue which extends the whole length of the University, are the dormitories. *Encina Hall*, for young men, is at the east, and occupies a ground area of 312 x 150 feet. It is provided with electric lights, hot and cold water, steam heat, suitable furniture, bathrooms on each floor, and has accommodations for 315 students. Built of the same material as the quadrangle, four stories high, and deco-

rated with end arcades, a central arched porch, and mosaic work, it forms the terminus of what will be the grand facade of the University, two-thirds of a mile long. *Roble Hall*, for young women, is at the west of the Memorial Arch. It is of concrete, is about a third the size of Encina Hall, and will accommodate about 100 students.

The Leland Stanford Junior Museum, a concrete building, 386 x 156 feet, including wings, is situated a quarter of a mile from the quadrangle, on the west side of the Palo Alto avenue. At the main entrance, four large columns form the principal feature of the facade. The vestibule is 45 x 56 feet, and 70 feet high, and is faced with marble. The art galleries are lighted with skylights, and electricity is provided for all the rooms. The building is surmounted by statues of Plato, Herodotus, Aristotle, and Plutarch.

Encina Gymnasium, is a frame building, 94 x 92 feet. It will be equipped with the most approved gymnastic apparatus, including lockers, baths, and running track. It will be ready for use in January, and will be heated by steam and lighted by electricity. Roble Gymnasium, now in process of construction, will be similarly equipped.

TRUSTEES.

The general management and control of the institution is vested in a board of twenty-four trustees, chosen for life, of whom fifteen constitute a quorum. The charter provides that the Founders, during their lives, shall "perform all the duties and exercise all the powers and privileges enjoined upon and vested in the trustees."

GOVERNMENT OF THE STUDENTS.

In the government of the University the largest liberty consistent with good work and good order will be given to the students. The University is not a reform school; its bounty

is intended for the earnest and industrious student, and the indolent or unworthy will not be retained in the institution.

RELIGIOUS SERVICES.

Religious instruction is provided in accordance with the provision of the Charter which prohibits sectarian instruction, but requires the teaching of "the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man." Voluntary chapel services are held daily, and an address on some religious or ethical subject is given every Sunday morning by some clergyman or layman invited from abroad, or by some member of the faculty.

A Students' Christian Association has also been organized. It holds regular meetings, and has begun several systematic courses of Bible study.

DEPARTMENTS.

The following departments have been established: Greek; Latin; Germanic Languages; Romance Languages; English Literature; Philosophy; Ethics; History and Art of Education; History; Political Science; Mathematics; Physics; Chemistry; Botany; Entomology; Physiology; Physical Training; Zoology; Geology; Freehand Drawing; Mining Engineering; Civil Engineering; Mechanical Engineering.

ADMISSION AND GRADUATION.

Candidates must be at least sixteen years of age. They must present certificates of good moral character, and if from other colleges or universities, must bring certificates of honorable dismissal.

ENTRANCE EXAMINATIONS.

Examinations in all the subjects required for admission are held at the beginning and at the end of the school year. In June these examinations will be held at Palo Alto and simultaneously at other appointed places; in September at Palo Alto only. No entrance examinations will be held at any other time.

ADMISSION ON EXAMINATION.

All candidates for admission, except those provided with certificates as specified on page 25, in addition to the ordinary grammar school preparation (including Arithmetic, Geography, etc.), must present themselves for examination in *ten* of the following subjects, including 1 (English):

1. English.
2–3. Elementary Algebra.
4. Plane Geometry.
5. Solid Geometry and Trigonometry.
6. Advanced Algebra.
7. Physics.
8. Chemistry.
9. Physiology.
10. Botany.
11. Zoology.
12. Freehand Drawing.
13. American History.
14. English History.
15. Grecian and Roman History.
16. English Literature.
17. Spanish.
18–19. French.
20–21. German.
22–23. Latin.
24. Latin.
25–26. Greek.

Elementary Algebra, French, German, and Greek count as two subjects each; Latin as three. But Latin may be divided, candidates offering 22–23 without 24.

The following will indicate the amount of preparation necessary in the various subjects. Full equivalents of the specific work outlined will be accepted in all subjects.

1. *English.*—Every applicant will be required to write an essay, correct in spelling, punctuation, sentence-structure, and paragraphing, on a subject drawn from one or more of the books in the following list, and will be tested upon his ability to write from dictation, to quote accurately, to outline symmetrically, and to explain allusions and other difficulties of thought and expression. *Poetry and the Drama:* Shakespeare's Merchant of Venice, and Julius Cæsar; Scott's Lady of the Lake; Whittier's Snow-Bound; Longfellow's Evangeline. *Prose:* Irving's Sketch-Book; Thackeray's English Humorists; The Sir Roger de Coverley Papers from the Spectator; Scott's Antiquary; Macaulay's Essay on Addison; Macaulay's Life of Johnson. (The equivalent of two years in the High School.)

Substantial equivalents, such as the books prescribed by the University of California or by Harvard University, will be accepted in 1892, instead of any or all of the books in this list.

2–3. *Elementary Algebra.*—Through quadratic equations, including the theory of exponents. All of McClellan's Algebra; or the portion indicated in Charles Smith's Elementary Algebra, or an equivalent. (The equivalent of one and a half years in the High School.)

4. *Plane Geometry.* As much as is contained in Byerly's Edition of Chauvenet's Geometry, or an equivalent, including a large selection of original exercises. (The equivalent of one year in the High School.)

5. *a. Solid Geometry.*—As much as is contained in Byerly's Edition of Chauvenet's Solid Geometry, with additional exercises. (The equivalent of one half year in the High School.)

b. Trigonometry.—As much as is contained in Lock's Plane Trigonometry, with a brief course in Spherical Trigonometry. (The equivalent of one half year in the High School.)

6. *Advanced Algebra.*—The equivalent of Charles Smith's Treatise on Algebra, or Hall and Knight's Higher Algebra. (The equivalent of one year in the High School, in addition to the elementary course in Algebra.)

7. *Physics.*—The equivalent of a year's work in experimental Physics. This should cover the amount of laboratory practice outlined in such a manual as Shaw's Physics by Experiment, Gage's Laboratory Manual, or Chute's Physics. It is preferred that the study begin by the laboratory method, and that the text-book, if used at all, should follow the laboratory manual. For this method of study, Shaw's Physics by Experiment is more suitable than the other books named, as it does not pre-suppose any text-book knowledge of the subject.

8. *Chemistry.*—Sufficient practical work in the chemical laboratory to have acquired familiarity with laboratory methods, such as can be obtained with not less than four hours per week of laboratory work for one year. Remsen's Introduction to the Study of Chemistry.

9. *Physiology.*—The elements of human physiology and hygiene, the equivalent of Martin's Human Body. (The equivalent of one year in the High School.)

10. *Botany.*—A knowledge of plants and plant-structure and development obtainable from experimental work in connection with Bessey's or Campbell's Botany, or some similar work. (The equivalent of a full year in the High School, of which two-thirds at least should be laboratory work.)

11. *Zoology.*—A knowledge of the structure of some common animals, obtainable from laboratory work in connection with Colton's Practical Zoology, or some similar work. (The equivalent of one year in the High School.)

12. *Freehand Drawing.*—The ability to make a reasonably accurate copy from flat patterns of simple forms in outline, and to make a correct outline drawing and an accurately shaded drawing from a group of geometrical solids. (The equivalent of one year in the High School.)

13. *American History.*—A thorough knowledge of Sheldon's Studies in American History (Boston, 1891), Thwaite's Colonies (Epochs of American History Series, New York and London, 1891), and Macy's Our Government (revised edition, Boston, 1890). These should be studied in connection topically. MacCoun's Historical Geography of the United States will prove a valuable aid; and for further reading, Fiske's Civil Government, the American Statesmen Series, and the American Commonwealths Series are recommended. (The equivalent of one year in the High School.)

14. *History of England.*—The equivalent of Gardiner's Student's History of England (New York and London, 1890), and Fonblanque's How We Are Governed. These may be supplemented by readings in Green's History of the English People and the Epochs of Modern History Series. (The equivalent of one year in the High School.)

15. *Grecian and Roman History.*—The equivalent of Fyffe's History of Greece (History Primers), Allen's Short History of the Roman People (Part II of Allen's and Myers' Ancient History, Boston, 1891), and Tighe's Development of the Roman Constitution (History Primers). For further topical study, read the Epochs of Ancient History Series. (The equivalent of one year in the High School.)

16. *English Literature.*—Complete familiarity, both as to substance and as to form, is expected, with the contents of the books mentioned below. Preparation should embrace questions of grammar, of metre, and of rhetorical form, and some attention should be given to so much of literary history and biography as naturally connects itself with the works read. Candidates will be tested upon their ability to quote freely and accurately, to paraphrase intelligently, and to outline symmetrically. *Prose:* (*a*) Burke's Speeches on the American War and Letter to the Sheriffs of Bristol, edited by A. J. George; or (*b*) Genung's Rhetorical Analysis, in connection with some such work as A. S. Hill's Principles of Rhetoric. *Poetry:* Hales's Longer English Poems, omitting Shelley's Adonais. *Word Derivation:* The etymological notes to the selections from Spenser and Milton in Hales's Longer English Poems. The derivations in question should all be carefully verified in Webster's International Dictionary. (The equivalent of one year in the High School.)

In 1892, the books prescribed by the University of California under the head of "English 14" will be accepted as equivalents.

17. *Spanish.*—Monsanto and Languellier's Spanish Course; Knapp's Spanish Readings. (The equivalent of one year in the High School.)

18–19. *French.*—Whitney's French Grammar, Part I, with written exercises; systematic training in pronunciation (Passy, *Le français parlé*); Super's French Reader, Parts I–III, except *M. de Montaiglon* and *Le savant et le crocodile*); Souvestre, *Un Philosophe sous les toits* (Fraser); French Composition (Fasnacht, Part I). (The equivalent of two years in the High School.)

20–21. *German.*—A satisfactory preparation will require: the ability to translate easy German prose and verse at sight;

an accurate knowledge of the principles of grammar, embracing especially inflections and syntax, the composition of words, the force of prefixes and suffixes, and the relation of the English and the German consonantal changes; also the ability to translate easy prose from English into German. This preparation would be represented approximately, in reading, by Brandt's or Whitney's Reader, and the careful study of one or more modern dramas, in grammar, by Brandt's, Joynes-Meissner's, or Whitney's Grammar, and in German prose by the first twenty-six exercises in Harris' German Prose Composition. (The equivalent of two years in the High School.)

All applicants for admission are expected to present a statement from their former teacher of the amount of German read and text-books used.

22–23. *Latin.*—The translation of a passage of easy Latin at sight; the principles of Latin Grammar, especially the inflection of nouns and verbs; the first four books of Cæsar's Gallic War; Cicero's four orations against Catiline; the translation into Latin of simple English based on the Cæsar read. (The equivalent of two years in the High School.)

24. *Latin.*—Cicero's orations, *pro Archia Poeta* and *pro Lege Manilia;* the first six books of Vergil's Æneid, including prosody; and the translation into Latin of a passage of connected English based on Cicero. (The equivalent of one year in the High School.)

Excellence in writing Latin will often compensate for deficiences in other parts of the examination. The method suggested by Daniell's Exercises in Latin Composition is recommended.

25–26. *Greek.*—Grammar, the inflections, the formation of words, and the essential points of the syntax; Xenophon, Anabasis, books I–IV; Homer, Iliad, books I–II; Greek

Prose Composition (Jones' text-book, or an equivalent); translation at sight of easy prose. (The equivalent of two years in the High School.)

TIME OF EXAMINATION.

Entrance examinations are held in the following order. For dates see calendar, page 5.

First Day.—Physiology, 9.00–10.30; Elementary Algebra, 10.30–12.30; Plane Geometry, 1.30–3.30; English, 3.30–6.00.

Second Day.—Advanced Algebra, Spanish, and Physics, 8.30–10.30; German and Greek, 10.30–12.30; Solid Geometry, English History, and French, 1.30–3.30; Latin (22–23), 3.30–6.00.

Third Day.—Latin (24), Chemistry, and Botany, 8.30–10.30; Trigonometry and English Literature, 10.30–12.30; American History and Zoology, 1.30–3.30; Grecian and Roman History and Freehand Drawing, 3.30–6.00.

Candidates may be admitted to partial standing in the University upon passing at least eight of the required subjects for admission, if in the judgment of the Faculty they are qualified to go on with regular University work. All deficiences must be made up before a student can be admitted to full standing.

Candidates for admission may if they prefer, take a part of their examinations a year before they propose to enter (June and August being considered as one period). But no account will be taken of the result of such examinations unless at least four subjects are passed.

ADMISSION ON CERTIFICATE.

Certificates from high schools or schools of equivalent rank, in or out of the State, will not be accepted in place of examinations unless the applicant has completed a full course in the school.

Application for admission by certificate must be made by the principal of the school and not by the student himself.

Certificates will not be accepted in any particular subject, if for any reason the work done is deemed insufficient or unsatisfactory by the Faculty.

Blanks for admission on certificate may be obtained from the Registrar. To insure consideration certificates should be forwarded as early as possible during the summer.

SPECIAL STUDENTS.

Persons at least twenty years of age, who are not candidates for a degree, and who wish to pursue some one study and its related branches, may be admitted as special students, without passing the usual entrance examinations, on the recommendation of the professor under whom the specialty is to be taken. But the professor concerned may impose any test, by examination or otherwise, that he may deem advisable. Candidates are advised to correspond directly with the professor in whose department they desire to work. Blank applications for admission as special students may be obtained of the Registrar.

A failure on the part of any special student to maintain a good standing in the special studies to which he is admitted will at once sever his connection with the University.

ADMISSION TO ADVANCED STANDING.

Students from other institutions of recognized collegiate rank, who present letters of honorable dismissal, may be admitted to such standing and upon such terms as the Faculty may deem equitable. Every such candidate is required to present, along with a catalogue of the institution in which he has studied, a full statement, duly certified, of the studies he has completed, including studies passed or credited at entrance.

REGISTRATION.

At the beginning of each semester each student must register in person at the Registrar's office. On Registration Day at the beginning of the collegiate year students register for the

work of the whole year; and no credit will be allowed for work not so registered. Changes in registration can be made only by permission of the Faculty.

GRADUATION.

The Degree of Bachelor of Arts (A. B.) will be granted to students who have satisfactorily completed the equivalent of four years' work of fifteen hours of lecture or recitation weekly.

It is further provided that each student shall select as his major subject or specialty the work of some one professor. This professor shall have the authority to require such student to complete this *major* subject, and also as *minor* subjects such work in other departments as the professor may regard as necessary or desirable collateral work. Such major and minor subjects taken together will not exceed the equivalent of five recitations per week, or one third of the student's time for the four years of undergraduate work. It is also provided that each candidate for any degree must take, before graduation, Course 1 in English (Art of Writing).

With these exceptions, all the undergraduate work in all the courses will be elective. The student may freely choose for such elective work any subject taught in the University, which his previous studies have prepared him to undertake.

The professor in charge of the major subject of any student is expected to act as advisor to the student in educational matters, and the recommendation of such professor is necessary to graduation.

ADVANCED DEGREES.

To students having already the Bachelor's Degree from an institution of recognized collegiate rank, the degree of Master of Arts (A. M.) will be granted on the completion of an additional year of satisfactory work in residence at the University, accompanied by an approved thesis embodying the results of independent investigation and research.

In the departments of applied science the professional degrees of Mechanical Engineer (M. E.) and Civil Engineer (C. E.) will be granted at the completion in residence of a year of satisfactory graduate work in the departments indicated by the degree, and on presentation of an approved thesis or report upon some original or important investigation.

The degree of Doctor of Philosophy (Ph. D.) will be granted after the successful completion of an approved course of study of not less than three years after the reception of the Baccalaureate Degree, on the presentation of an acceptable printed thesis which shall embody the results of original research.

No degree will be granted to any person who has not spent at least one year in resident study at the University. No honorary degrees will be given.

EXPENSES OF THE STUDENT.

Tuition in all Departments of the University is free.

Board in Encina and Roble Halls is furnished at cost, the price at present being fixed at $20 per month. This includes board, furnished rooms, light, heat, and attendance.

A limited number of rooms with board may also be obtained at Mayfield and University Park. Board and rooms, at varying prices, may be obtained in San Jose, Santa Clara, Mountain View, Redwood, and other places on the line of the Southern Pacific Railway. Train service is such that students living in these places can easily go to and from the University daily.

The expenses of the student, exclusive of clothing and railway fares, need not exceed $200 per year.

SELF-SUPPORT OF STUDENTS.

While no provision has been made for affording direct pecuniary assistance to students, a considerable number are able to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line

of janitor service, care of dormitories and table service, office and laboratory assistance, and the like. Nothing, however, can be promised in advance, and no one ought to come to the University without resources for a time at least. The organization and direction of the student labor has been entrusted to the committee on students' affairs of which Professor Swain is chairman.

COURSES OF INSTRUCTION.

1891-92.

GREEK.

1. Elementary Greek. Grammar; reading of selections from Xenophon; Greek composition; translation at sight. *Five hours a week*, through the year. Dr. LAIRD.

2. Lysias: selected orations; Plato's Apology of Socrates; six books of Homer's Odyssey; Greek composition. *Three hours a week*, through the year. Dr. LAIRD.

3. Selections from Herodotus, Sophocles' Antigone, Aristophanes' Clouds; Greek composition. *Three hours a week*, through the year. Dr. LAIRD.

4. Introductory lectures upon the chief principles of the Science of Language; the relation of Greek to other branches of the Indo-European family; history of the sounds and inflections of Greek and Latin. *Two hours a week*, through the year. Dr. LAIRD.

LATIN.

GRADUATE COURSES.

1. Seminary for the study of Latin Comedy. The work of the year centers in Terence, and the two meetings a week are devoted to the critical study of select portions of Terence and to the reading of papers by the members. Professor PEASE.

2. Practical exercises in the translation of Latin into English and English into Latin; lectures on the Miles Gloriosus of Plautus. *Two hours a week*, through the year. Professor PEASE.

3. Lectures on the development of Latin Comedy. *One hour a week*, first semester. Professor PEASE.

4. Study of inscriptions and fragments of early Latin. *One hour a week*, second semester. Professor PEASE.

5. Journal Club. Bi-weekly.

UNDERGRADUATE COURSES.

1. *a.* Cicero, de Senectute and de Amicitia; Livy, books XXI and XXII. *Three hours a week. b.* Translation at sight and Latin composition. *Two hours a week*, through the year. Mr. NEWCOMER.

[Course 1 *b* not given the first semester.]

2. Horace, selections from the Satires, Epistles, and Odes; Tacitus, Germania, Agricola, and selections from the Annals. *Three hours a week*, through the year. Mr. GRAU.

3. Terence, Adelphoe; Plautus, Menaechmi; Cicero, Select Letters; Pliny, Select Letters. *Three hours a week*, through the year. Professor PEASE.

4. Lyric Poetry. Selections from Catullus, Tibullus, and Propertius; Silver Prose. Selections from Velleius, Petronius, Quintilian, and Gellius. *Two hours a week*, through the year.

[Course 4 will not be given in 1891–92.]

GERMAN.

1. Brandt's German Grammar and Reader; Harris' German Composition; translation of easy prose and poetry. *Five hours a week*, through the year. Assistant Professor GRIFFIN, and Mr. GRAU.

2. Die Piccolomini; Lessing's Prosa; Hermann and Dorothea; advanced grammar and composition; writing from dictation; translation at sight and at hearing. *Three hours a week*, through the year. Assistant Professor GRIFFIN.

3. *a.* Heine's prose and verse; translations, with a critical examination of the literary and political history of his times, and the form of his verse. *Two hours a week*, first semester. *b.* Modern German Authors and their writings. *Two hours a week*, second semester. Assistant Professor GRIFFIN.

4. German Prose Composition. *One hour a week*, second semester. Assistant Professor GRIFFIN.

5. German Conversation. *One hour a week*, second semester. Mr. GRAU.

ROMANCE LANGUAGES.

1. Whitney's French Grammar, Part I, with written exercises; systematic training in pronunciation (Passy, *Le français parlé*); Super's French Reader, Parts I–III, except *M. de Montaiglon* and *Le savant et le crocodile*; Souvestre, *Un Philosophe sous les toits* (Fraser); French composition (Fasnacht, Part I). *Five hours a week*, through the year. Mr. BRUN.

2. *a*. French authors of the 18th and 19th Centuries; *Tableaux de la Révolution francaise* (Crane and Brun); Modern French Lyrics (Bowen); Sandeau, *Mlle. de la Seiglière* (Warren); Merimée, *Colomba* (Fontaine); Whitney's Grammar, Part II. *Three hours a week*, first semester. *b*. De Vigny, *Cinq Mars* (Owen's notes); Hugo, *Les Travailleurs de la mer* (Owen's notes); Hernani (Matzke); Critical study of idioms (Chardenal). *Three hours a week*, second semester. Professor TODD.

3. Romance Seminary. *Chanson de Roland*. *Three hours a week*, through the year. Professor TODD.

4. Introduction to Romance Philology. *Two hours a week*, through the year. Professor TODD.

5. Spanish. Knapp's Spanish Grammar and Spanish Readings. *Two hours a week*, through the year. Professor TODD.

ENGLISH LITERATURE.

1. The Art of Writing. A systematic course in English Composition. *Two hours a week*, through the year, besides frequent private conferences with the instructors. Mr. NEWCOMER.

Required of all students.

2. An introduction to the study of English and American Literature. *Two hours a week*, through the year. Mr. GRIGGS, and Assistant Professor SAMPSON.

3. The Development of English Prose, from Sidney to Macaulay: based upon Minto's Manual of English Prose Literature. *Three hours a week*, through the year. Mr. GRIGGS, and Assistant Professor SAMPSON.

4. Chaucer, Spenser, Milton: detailed study of the chief works, and a survey of the life and times of each author. *Three hours a week*, through the year. Professor ANDERSON.

5. Shakespeare and other Elizabethan dramatists. *Two hours a week*, through the year. Professor ANDERSON.

6. Seminary for the critical study of the literature of the nineteenth century. *Two hours a week*, through the year. Professor ANDERSON.

7. Old English, and the History of the Language. Sweet's Primer and Anglo-Saxon Reader; Lounsbury's History of the English Language. *Three hours a week*, through the year. Professor ANDERSON.

8. American Literature: based upon Stedman's Poets of America. *Three hours a week*, second semester. Assistant Professor SAMPSON.

9. An Introduction to the Study of the Drama; based upon Moulton's Ancient Classical Drama. *Three hours a week*, second semester. Mr. NEWCOMER.

PHILOSOPHY.

1. Elementary Psychology. *Three hours a week*, through the year. Professor BARNES.

2. Advanced Psychology. *Three hours a week*, through the year. Professor BARNES.

3. Introduction to Ethics. *a.* The definition of ethics, the relations of ethics; the possibility of an exact science of ethics; the sources of our knowledge of right and wrong; the origin and development of the ideas of God, freedom, duty.

soul, immortality; the grounds for the acceptance of these ideas. *b.* The history of ethical belief and of ethical conduct. *c.* The study of certain spiritual teachers (Emerson and Carlyle, Dante). *d.* The study by each member of the class of some one system of ethical theory or ethical belief. *Three hours a week*, through the year. Assistant Professor GRIGGS.

4. Kant. *a.* The critical study of the Critique of Pure Reason and the Critique of Practical Reason. *b.* Lectures on philosophy antecedent to Kant; the Kantian system of philosophy; the influence of Kant on subsequent thought. *c.* The study of selections from philosophical literature illustrating the influence of Kant. *Two hours a week*, second semester. Assistant Professor GRIGGS.

5. Plato. *a.* The critical study of selected dialogues. *b.* Lectures on Greek Philosophy antecedent to Plato; the Platonic System; the Influence of Plato on subsequent thought. *Two hours a week*, second semester. Assistant Professor GRIGGS.

6. Laws of Organic Life. Heredity, variability, response to external stimulus, etc., with a review of the theories of evolution; critical studies by the students of the chief works bearing on the subject; the writings of Darwin, Wallace, Spencer, Weismann, Agassiz, Cope, Lankester, and others. *Two hours a week*, first semester. President JORDAN.

7. Outline of the Theory of Morals, with some practical applications to individual, family, and social life. A course of ten lectures to be given in March by Dr. SCHURMAN.

THE HISTORY AND ART OF EDUCATION.

1. General history of educational theory and practice. *Three hours a week*, through the year. Professor BARNES.

2. History of education in America. *Two hours a week*, through the year. Professor BARNES.

3. Comparative study of city and state school systems in the United States, with special reference to school organization. *Three hours a week*, through the year. Professor BARNES.

4. Seminary for the study of children. *Two hours a week*, through the year. Professor BARNES.

Work in the experimental and practice school will be required of all students.

Students in this department will be required to take the work in psychology, unless they have already done its equivalent.

Teachers not candidates for a degree, but wishing to carry on special studies in the department, will be given every facility for doing such work.

HISTORY.

1. Epochs of Grecian and Roman History, with special reference to Institutions. *Three hours a week*, through the year. Professor HOWARD.

This course is open to all students, and is designed to afford a general training in scientific method. The systematic use of books is had constantly in view. In class the work consists of informal lectures, critical discussions, and written reviews. During the year, in addition, every student is expected to present before the class oral or written reports on subjects assigned for special reading.

2. American History, to 1787. *Three hours a week*, through the year. Professor HOWARD.

Course 2 is open to advanced students only. Without entirely excluding other topics, it is devoted mainly to the constitutional history of the Colonies. The origin and development of the various types of local organization receive particular attention. An attempt is made, in this period, to trace the beginnings of our present State and National constitutions. Every student is expected to prepare a theme, showing the results of independent research and comprising an extended bibliography. This course is important as a preparation for the study of law.

3. Constitutional and Political History of the United States, since 1787. A continuation of Course 2.

[Course 3 will not be given in 1891–92.]

4. The French Revolution, with special reference to its causes and its constitutional experiments. *Two hours a week*, first semester. Professor HOWARD.

Open to advanced students having a good knowledge of the history of France and of general European history.

5. Early Institutions, including an outline of the history of Roman law. *Two hours a week*, second semester. Professor HOWARD.

6. Historical Seminary. The investigation of special questions, selected during the year 1891–92 mainly from the field of American institutions. Open to graduates and advanced undergraduates. *Two hours a week*, through the year. Professor HOWARD.

7. Period of the Renaissance and the Reformation. A course of lectures by Ex-President WHITE of Cornell University, to be given during the second semester.

ECONOMICS.

1. The Principles of Political Economy. Lectures and recitations. *Three hours a week*, first semester. Dr. ELLIOTT.

2. Economic History, and investigation of current economic questions. Lectures, recitations, and reports by students on topics assigned. *Three hours a week*, second semester. Dr. ELLIOTT.

Open to those who have completed course 1, or its equivalent.

3. The Tariff Controversy in the United States. Lectures. *One hour a week*, through the year. Dr. ELLIOTT.

Open to all students.

MATHEMATICS.

1. *a.* Solid Geometry (Byerly's edition of Chauvenet, with original exercises); Trigonometry (Lock's); plane Analytic Geometry. *Five hours a week*, through the year. *b.* Solid Geometry; Advanced Algebra (Charles Smith's Treatise);

Trigonometry. *Five hours a week*, through the year. *c*. Advanced Algebra. *Two hours a week*, through the year. Messrs. W. H. MILLER, J. A. MILLER, and COX.

b is required of students in general courses; *a* and *c* are required of students in engineering.

2. *a*. Analytic Geometry. Elementary course (Brigg's text). *b*. Calculus. Elementary course (Taylor's calculus). *Five hours a week*, through the year. Mr. W. H. MILLER.

3. Solid Analytic Geometry. *One hour a week*, through the year. Mr. W. H. MILLER.

4. Advanced Course in Analytic Geometry and Calculus (Smith's Conic Sections, and Rice and Johnson's Calculus). *Five hours a week*, through the year. Professor SWAIN.

5. Elementary Mechanics. *Three hours a week*, through the year. Mr. J. A. MILLER.

6. Analytic Mechanics. *Three hours a week*, through the year. Professor SWAIN.

7. Williamson's Calculus. *Two hours a week*, through the year. Professor SWAIN.

8. Asteroids and Comets. A course of lectures to be given in May by Dr. KIRKWOOD.

PHYSICS.

1. Elementary Laboratory Physics. The elements of experimental physics, experiments to be performed by the students themselves under the supervision of the professor in charge of the department. *Five hours a week*, through the year. Professor SANFORD.

For students who have completed course 1 in mathematics.

2. Elementary Physics. *a*. Lectures and recitations. *Two hours a week*, through the year. *b*. Advanced laboratory work. *Three hours a week*, through the year. Professor SANFORD.

For students who have completed course 1.

3. Advanced Physics. *a*. Lectures and recitations on the elements of theoretical Physics. *Two hours a week*, through

the year. *b.* Special problems in theoretical and laboratory physics, to meet the needs of individual students. Professor SANFORD.

Students who make Physics their major subject will take course 1 in Chemistry the first year.

CHEMISTRY.

1. Elementary Inorganic Chemistry. Lectures and reviews, *three hours a week*, through the year; laboratory work, *daily*, through the year. The more common elements and inorganic compounds will be studied in the laboratory, and practice will be given in qualitative analysis. Assistant Professor RICHARDSON.

2. Elementary Organic Chemistry. Lectures and reviews, *two hours a week*, through the year; laboratory work, *daily*, through the year. Typical carbon compounds will be prepared and studied, and quantitative analysis will be taken up. Professor STILLMAN, and Assistant Professor RICHARDSON.

For students who have had the equivalent of course 1.

3. Industrial Chemistry. Lectures and laboratory work in the principles and processes underlying the chemical industries: Dyeing, sugar-making, and refining, paper, explosives, purity of foods, etc. Second semester, Professor STILLMAN.

4. Advanced work in chemistry arranged to meet the needs of individual students.

BOTANY.

1. Elementary Botany. Study of types of the principal groups of plants, with lectures in special morphology and classification (Campbell's Elements of Structural and Systematic Botany). *Five hours a week*, second semester. Professor CAMPBELL.

2. *a.* Morphology and Classification of Thallophytes. Lectures, laboratory work, and reading. *Five hours a week*, first semester. *b.* Morphology and classification of Arche-

goniata and Spermaphyta. Continuation of *a*. *Five hours a week*, second semester. Professor CAMPBELL.

3. *a*. Comparative Anatomy and Histology of Vascular Plants. Laboratory work and reading. *Five hours a week*, first semester. *b*. Experimental Physiology. Laboratory work and reading. *Five hours a week*, second semester. Professor CAMPBELL.

4. Special work arranged for advanced students.

Course 1 must precede all others, and it is recommended that course 2 be taken before course 3, *a* or *b*.

ENTOMOLOGY.

1. *a*. Lectures treating of the zoological position of insects: the characteristics of the orders, sub-orders, and the more important families; the habits of insects, with special reference to those species that are of economic importance; and the practical application of entomology, including discussions of insecticides, and of the various methods of controlling the ravages of insects injurious to agriculture. *b*. Laboratory and field work including the study of insect anatomy, the determination of genera and species, practice in museum methods, and the working out of the life history of insects. January, February, and March. Professor COMSTOCK.

PHYSICAL TRAINING AND HYGIENE.

1. Hygiene. Lectures. *One hour a week*, through the year. Professor WOOD.

2. Physical Training. Class drills and special work on the apparatus based upon medical examinations. Beginning with second semester. Professor WOOD, and Miss LOWELL.

PHYSIOLOGY AND HISTOLOGY.

1. Elementary Human Physiology. Lectures and recitations, *five hours a week;* laboratory work, *four hours a week*. First semester. Professor JENKINS.

This course is offered for those students who, while not wishing to elect physiology as either a minor or major subject, still desire to gain some practical knowledge of the human body. This course is not a preparatory one to any of those that follow.

2. General Physiology and Histology. Lectures and exercises, *five hours a week;* laboratory work, *six hours a week*. Through the year. Professor JENKINS.

3. Special courses in Physiology. Professor JENKINS.

Open to those who have taken course 2, or its equivalent.

4. Special courses in normal Histology. Professor JENKINS.

Open to those who have taken course 2, or its equivalent.

Students preparing for the study of medicine, are advised to take Physiology as the major subject, with minor subjects in Chemistry, Botany, and Zoology.

ZOOLOGY.

1. General Zoology. Laboratory studies of typical forms of animals, with lectures on their anatomy and physiology; Marshall and Hurst's Practical Zoology; Brooks' Invertebrate Zoology; Huxley and Martin's Biology. *Five hours a week*, through the year. Professor GILBERT.

2. Systematic Zoology. Laboratory work in the classification of the vertebrates. *Five hours a week*, second semester. Professor GILBERT.

3. Comparative Anatomy of the Vertebrates. Laboratory studies and reading; Parker's Zootomy; Wilder and Gage's Anatomical Technology; Bell's Comparative Anatomy and Physiology; Wiedersheim's Comparative Anatomy of the Vertebrates. *Five hours a week*, through the year. Professor GILBERT.

4. Advanced course in Systematic Ichthyology. *Five hours a week*, through the year. Professor GILBERT.

GEOLOGY.

1. Lectures on dynamic and structural Geology. *Five hours a week*, second semester. Professor BRANNER.

2. Field and office work in topography as required for geological study; construction of topographic and geological maps, models, and sections. Second semester. Professor BRANNER.

MINERALOGY AND MINING ENGINEERING.

The work in Mining Engineering will not be begun until the second year. First-year students in this department may take the work in Civil Engineering, with the courses in Elementary Geology.

FREEHAND DRAWING.

1. *a.* Geometrical designs in outline, from the blackboard. *b.* Geometrical designs, simple forms, and outlines of simple objects, with pencil, and with pen. *c.* Drawing from the geometrical model in outline, with pencil, and with pen. *d.* Exercises in shading: in flat tints, in pencil, and in wash; graded tints, in pencil, and in wash. *e.* Shading the geometrical model: in pencil, and in wash. *f.* Three lectures on the science of perspective; a course of perspective problems, to be done with instruments. At different times original designs, and memory and time sketches, will be required. (Reference works: Ruskin's Modern Painters and Elements of Drawing, and Tyrwhitt's Pictorial Art.) *Six hours a week*, first semester. Mr. BROWN.

Required of all students in Mechanical, Electrical, and Civil Engineering.

2. *a.* Graded exercises in still-life: in light and shade; in pencil, with moderate light and shade; in wash, with full light and shade; in charcoal, in full light and shade; in pen and ink, in both full and restricted light and shade. *b.* Lectures

on the interpretation of the values of local color. Advanced still-life work in different media. Study of drawings of Dürer, Rembrandt, Titian, Raphael, Holbein, Turner, Lalanne, Howard Pyle, Harry Fenn, Joseph Pennell, A. B. Frost, and others. Lectures on interpretation in pen and ink for photographic reproduction. *c.* Copying, as a study of technique, works by various masters. Lectures on the technique of various draughtsmen, illustrated by examples of their work. *d.* Drawing from the cast in charcoal. *e.* Drawing from nature in wash, pen and ink, charcoal, line and wash, and pencil. Lectures on studying from nature, on the literature of drawing, and on the technique of drawing. (Reference works: Hamerton's Graphic Arts, Ruskin's Elements of Drawing, Joseph Pennell's Pen and Ink Draughtsman, Allonge's Charcoal Drawing, and J. D. Harding's works.) *Six hours a week*, second semester. Mr. BROWN, and Miss AMES.

Required of all students in Mechanical and Electrical Engineering, and open to all who have had course 1 or its equivalent.

To some extent the student may, with approval of Instructor, select his own lines of work for this semester.

3. Students who have had courses 1 and 2 or their equivalent, may work in color, the time being credited to them as freehand drawing.

CIVIL ENGINEERING.

1. *a.* Linear Drawing, *six hours a week:* Round Writing and Lettering, *four hours a week*. First half of first semester. *b.* Descriptive Geometry, including shades, shadows, and perspective. Lectures and recitations, *two hours a week;* drafting, *six hours a week*. Second half of first semester, and second semester. Professor MARX.

2. *a.* Land Surveying. Lectures and recitations, *three hours a week:* field work, *ten hours a week*. First semester. *b.* Railroad Surveying. Lectures and recitations, *three hours a*

week; field work, *ten hours a week*. Second semester. Professor MARX.

3. *a*. Strength of Materials. Lectures and recitations, *three hours a week;* laboratory work, *six hours a week*. First semester. *b*. Structural Details and Stresses in Roof and Bridge Trusses. Lectures and recitations, *three hours a week;* designing of roofs and bridges, *ten hours a week*. Second semester. Professor MARX.

4. *a*. Hydraulic and Water Supply. Lectures and recitations, *three hours a week*. First semester. *b*. Sewerage, and Roads and Pavements. Lectures and recitations, *three hours a week*. Second semester. Professor MARX.

It is to be understood that students in this department will take the collateral work which properly belongs to the course in Civil Engineering. The following outline of work is given for reference:

Collateral Studies.- Art of writing; advanced algebra; trigonometry; plane analytic geometry; lettering, linear and freehand drawing; descriptive geometry, including shades, shadows, and perspective; shop-work; solid analytic geometry; differential and integral calculus; analytic mechanics; physics; chemistry; laboratory and field-work; analytic mechanics; strength of materials.

Required Studies.—Surveying; graphical and analytical determination of stresses in roofs and bridges; masonry construction; engineering architecture; designing and laboratory work; water supply engineering; sewerage; irrigation; roads, streets, and pavements; the construction of harbors and canals, and the improvement of harbors and rivers; law of contracts; hydraulic laboratory work.

In addition to the above, students have the choice of electives in both general university and special professional work. In the latter, electives will be offered along the lines of Bridge, Railroad, Sanitary, Hydraulic, and Geodetic Engineering.

MECHANICAL ENGINEERING.

1. *a.* Woodworking and Pattern Making. Shop practice in use of carpenters' tools; joinery (hand and machine methods); wood-turning and carving; pattern-making. *Three exercises a week*, first semester, and one-third of second semester. *b.* Foundry Work. Moulding; core-making; casting, in iron and brass. *Three exercises a week*, latter part of second semester. *c.* Smith Work. Forging iron; forging steel; welding; tempering; tool making; riveting; calking; pipe-fitting. *Two exercises a week*, through the year. *d.* Machine-shop Work. Bench work in chipping, filing, and scraping metals; machine tool work: turning, drilling, boring, screw-cutting, planing, milling, grinding, fitting, polishing, etc.; brazing, soldering, and electric welding. *Two exercises a week*, through the year. *e.* Advanced Shop-work. Building machinery from original designs and drawings. *Two exercises a week*, through the year. Assistant Professor BRYANT, and Mr. BUCHANAN.

d and *e* cannot be begun until September, 1893.

2. *a.* Kinematics of Machinery. Lectures, recitations, and problems on the principles of mechanism and the design of elementary machines. *Five hours a week*, first semester, and *one hour a week*, second semester. *b.* Elementary Machine Design and Drawing. Lettering, sketching, and mill-work; design of gear teeth, cams, link motions, valve gear, etc.; Patent-office drawing and specifications. *Three exercises a week*, first semester; *two exercises a week*, second semester. Professor GALE.

Open to students who have completed algebra, plane and solid geometry, plane trigonometry, plane analytic geometry, mechanical drawing, and orthographic projections.

3. *a.* Steam Engineering. Lectures: historical development of the steam engine; analytical study of different forms of engines, boilers, and power apparatus; use of indicators; elements of economy in use of steam; design and adjustment of

valve-gearing; elements of the design and construction of boilers; selection and proportioning of boilers, engines, condensers, etc., for given work; heating by steam. *Three hours a week*, second semester. Professor GALE. *b.* Study of the Locomotive. *One hour a week*, second semester. Assistant Professor BRYANT. *c.* Practice in management and care of boilers, engines, and steam apparatus; use of indicators, etc. *One exercise a week*, second semester. Assistant Professor BRYANT.

Open to students who have completed algebra, plane and solid geometry, and elementary physics.

4. Machine Drawing. Sketching from measurement; working drawings; tracing; blue-printing; numbering; filing; indexing. *Two exercises a week*, first semester, and first half of second semester. Professor GALE.

Open to students who have had mechanical and freehand drawing, and descriptive geometry.

5. *a.* Thermodynamics. Mechanical theory of heat, and applications; furnaces, chimneys, boilers; air, gas, and steam engines; injectors and other steam jet apparatus; condensers; air compressors; transmission of power by compressed air; refrigerating machinery, etc. *Five hours a week*, first semester. *b.* Steam-Engineering Laboratory. Measurements of calorific power of fuels by calorimeter; measurements of furnace temperature by melting points, by platinum colorimeter, and by electric pyrometer; measurements of flow of steam through orifices and pipes; tests of injectors and jet-blowers. *One exercise a week*, first semester. Professor GALE.

Open to students who have completed differential and integral calculus, plane analytic geometry, physics, and elementary mechanics.

6. *a.* Dynamics of Machinery. Static equilibrium of mechanisms; kinetic equilibrium of mechanisms; velocity and acceleration diagrams; tangential and radial forces, referred to instantaneous axis; resultant pressures, and driving effort; friction; lubricants; graphical solution of the transmission

of force in the steam engine, as influenced by friction, acceleration, and gravity; fly-wheels; brakes; efficiency, proportions, and strength of machinery; belts, shafting, and transmission of power. *Five hours a week*, second semester. *b.* Machine Design and Drawing. Solution of problems in dynamics and strength of machinery. *One exercise per week*, first half of second semester; *three exercises per week*, last half of second semester. *c.* Dynamic Engineering Laboratory. Measurements of efficiency and endurance of lubricants; friction of journals; strength, twist, and deflection of shafting when transmitting power; measurements of power by Prony brake, and transmitting dynamometer; measurements of driving-power of belts of various materials, and of hemp, cotton, and wire ropes; experiments in balancing reciprocating and rotating bodies. *Two exercises a week*, second semester. Professor GALE.

Open to students who have completed kinematics of machinery (2, *a* and *b*), elementary physics, differential and integral calculus, analytic mechanics, and applied mechanics (strength and elasticity of materials).

c will not be given until 1893, as laboratory facilities cannot be provided earlier.

FOURTH AND FIFTH YEARS.

The work during the last years of the course will be elective, options being offered in—(I) Stationary Steam Engineering; (II) Electrical Engineering; (III) Mill Engineering and Construction; (IV) Marine Engineering; (V) Railway Machinery; (VI) Hydraulics and Hydraulic Motors.

The following is a rough outline of the courses at present proposed, the numerals indicating the branches to which each relates:

Speed regulation in machinery —design of governors (I, II, III, IV, VI). Steam pumps and pumping engines (I, VI). Methods of conducting tests of boilers, engines, pumping plants, etc. (I, II, III, IV, V, VI). Design of steam boiler

and accessories (I, IV, V). Design of locomotives, brakes, and railway machinery (V). Design of compound steam engine, with condenser, pumps, etc. (I, IV, V). Heating and ventilating buildings (I, III, IV). Theory and design of water-wheels and turbines, gates, nozzles, flumes, etc. (VI). Windmills—theory and design (III, V, VI). Electric measuring instruments (II). Dynamo-electric machinery, motors, converters, etc. (II, III, IV). Theory of potential (II). Principles of transformers (II). Electric lighting (II, III, IV, V). Electric welding (II, IV). Electro-metallurgy (II). Mill construction and arrangement: selection of site; foundations, walls, floors, roof; fire protection; heating, lighting, ventilating; placing engines, boilers, shafting, and machinery (III). Mill management and organization (III). Central electrical and power plants (I, II). Distribution of electricity for light and power (II). Computation of most economical size of wire (II). Protection of circuits, insulation, etc. (II). Telegraph engineering (II). Electric distribution of time (II). Electric fire-alarm systems (II, III). Electric railway signals (II, V). Power by electricity (II, III, IV, V, VI). Ocean telegraph cables (II). Underground electric cables and conduits (II). Marine architecture: stability and resistance of ships, form of hull, etc. (IV). Design of paddle-wheel and screw-propeller (IV). Laboratory work: boiler and fuel tests; steam calorimetry; steam engine tests; tests of water wheels and turbines; electrical tests, and measurements; original investigations by students.

Each student to receive the degree of M. E. must pass examinations on the subjects treated in Courses 1, 2, 3, 4, 5, and 6, and must have completed satisfactorily the equivalent of fifteen hours per week of lectures or recitations in the University for five years, including the prescribed work (not more than ten hours per week for two years) under one of the options numbered I to VI.

Students taking option II or VI may substitute for Course 5, *a* and *b*, equivalent amounts of work in electricity or hydraulics.

CATALOGUE OF STUDENTS.

GRADUATES.

Ashley, George Hall, M. E., *Rochester, N. Y.*, Geology
Cornell University.

Bland, Henry Meade, Ph. B., Ph. D., *College Park*, English
University of the Pacific.

Bolton, Sarah, Ph. B., *Berkeley*, Freehand Drawing
University of California.

Burk, Frederic Lister, B. L., *Mountain View*, Philosophy
University of California.

Busby, Isaac Vinton, A. B., *Anderson, Ind.*, English
University of Indiana.

Call, Richard Ellsworth, A. M., *Des Moines, Ia.*, Geology
University of Indiana.

Clark, Alice Ann, A. B., *San Jose*, History
University of the Pacific.

Clark, George Archibald, B. L., *Eden Prairie, Minn.*, Latin
University of Minnesota.

Clemans, Carl Lane, Ph. B., *Manchester, Ia.*, Physics
Cornell College.

Cox, Charles Ellwood, A. B., *College Park*, Mathematics
Haverford College.

Dickinson, Eveline Laura, A. B., *Oakland*, Latin
Smith College.

Greer, Medorem William, B. S., *Mayfield*, Physics
Massachusetts Institute of Technology.

Griggs, Jennie Fry, A. B., *Palo Alto*, English
University of Indiana.

Guppy, Estella Lois, A. B. (Univ. of the Pacific), A. M., *San Jose*, Philosophy
University of Michigan.

Hopkins, Thomas Cramer, *Greencastle, Ind.*, Geology
De Pauw University.

Howard, Joseph Henry, A. M., *Indianapolis, Ind.*, Latin
University of Indiana.

Kendall, Flora Caroline, A. M., *Oakland*, Education
University of Indiana.

McGrew, Charles Henry, B. S., Ph. M., *San Jose*, Education
Iowa Agricultural College.

Means, John Harrison, A. B., *Mooresburg, Ind.*, Geology
University of Indiana.

Michener, Charles Gerald, A. B., *San Francisco*, Latin
University of California.

Newsom, John Flesher, A. B., *Elizabethtown, Ind.*, Geology
University of Indiana.

Orton, Helen Dubois, A. B., *Santa Cruz*, Latin
University of Iowa.

Richardson, Emmet Lee, A. B., *Evansville, Ind.*, Romance Lang.
University of Indiana.

Russell, Jessie Eleanor, Ph. B., *San Jose*, History
University of the Pacific.

Squire, John Adams, A. B., *Arlington, Mass.*, Latin
Harvard University.

Thoburn, Wilbur Wilson, A. B., Ph. D., *Mayfield*, Zoology
Allegheny College.

Thompson, Alvah Beech, B. S., *San Jose*, English
University of Michigan.

Washburn, Arthur Henry, B. S., *San Jose*, Mathematics
Worcester Polytechnic Institute.

Woodward, Nancy Margaret, B. S., *Bloomington, Ind.*, Education
University of Indiana.

UNDERGRADUATES.

Adams, Charles Campbell,	*Galt*,	Greek
Alexander, John Edmundson,	*San Jose*,	Economics
Allabach, Lucy,	*Des Moines, Iowa*,	English
Amesbury, Louise,	*Rockport, Me.*,	English
Anderson, Day Luther,	*Evansville, Ind.*,	Mechanical Eng.
Archer, Leo Bethel,	*San Jose*,	Economics
Averett, Andrew Edgar,	*San Jose*,	Electrical Eng.
Avery, Clara Aurilla,	*Santa Cruz*,	German
Baker, Shirley,	*East Oakland*,	Electrical Eng.
Baker, William Samuel,	*Winters*,	Electrical Eng.
Bancroft, George Jarvis,	*Denver, Col.*,	Mechanical Eng.
Barney, James Mitchell,	*San Francisco*,	Civil Eng.

Barnhisel, Arthur Henry,	*San Jose*,	English
Barstow, Alfred, Jr.,	*San Francisco*,	Latin
Batchelder, Francis Joseph,	*Glen Ridge, N. J.*,	Civil Eng.
Bean, Carrie Adeline,	*San Jose*,	Latin
Belden, Roy Keney,	*Oakland*,	Mechanical Eng.
Benson, Frank Henry,	*San Jose*,	English
Billings, William Ethelbert,	*Santa Clara*,	English
Bishop, Hal Fiske,	*Alhambra*,	English
Blair, Frank Preston,	*Santa Rosa*,	English
Blake, William Ford,	*Santa Clara*,	English
Blinn, Holbrook,	*San Francisco*,	English
Blough, Noah Kline,	*La Grange, Ind.*,	Physiology
Boardman, Elizabeth Louise,	*Reno, Nev.*,	Mathematics
Boardman, Louis Philip,	*Reno, Nev.*,	French
Bostwick, Lindsley Webster,	*Tacoma, Wash.*,	Mathematics
Bremer, Milton Arthur,	*San Francisco*,	English
Briggs, Stewart Daniel,	*College Park*,	Physiology
Bristol, Susie Brown,	*Gainesville, N. Y.*,	English
Brown, Albert James,	*New London, Ind.*,	History
Brown, George Henry,	*Riverside*,	English
Brown, Lyman Van Wickle,	*Riverside*,	English
Brown, Will Lear,	*Rincon*,	Civil Eng.
Brown Walter Shirlaw,	*Stockton*,	Architecture
Buchanan, Richard Twells,	*Logansport, Ind.*,	English
Buck, Harriet A,	*Hillsdale*,	English
Buck, Rufus,	*Seattle, Wash.*,	Civil Eng.
Burckhalter, Bonnie May,	*Truckee*,	English
Burke, Mary,	*Santa Cruz*,	English
Burnell, Charles Sumner Smith,	*San Francisco*,	English
Burnett, Arthur Hardin,	*Tulare*,	Civil Eng.
Burrows, Fred Grant,	*Chualar*,	Physiology
Burwell, Leslie Moulthrop,	*Sacramento*,	Latin
Caldwell, Winifred,	*Pasadena*,	Mathematics
Calhoun, Grant,	*La Conner, Wash.*,	Physiology
Calhoun, Scott,	*La Conner, Wash.*,	Mathematics
Campbell, Horace,	*College Park*,	English
Campbell, Richard Jamieson	*Newtown, Ireland*,	English
Campbell, William Evan,	*College Park*,	English
Capron, John Clinton,	*Plymouth, Ind.*,	English
Carran, Thomas Jefferson, Jr.,	*Los Angeles*,	Greek
Castleman, Pember Stearns,	*Riverside*,	History
Chadsey, Charles Ernest,	*Nebraska City, Neb.*,	History

Champion, Louis Frederick,	*Oakland*,	Electrical Eng.
Champlin, George Beecher,	*Red Bluff*,	Civil Eng.
Chapman, Bertha Louise,	*Oakland*,	English
Clark, Grace Eleanor,	*San Jose*,	Physiology
Code, Thomas K,	*San Francisco*,	Mining Eng.
Coffey, Louis John,	*Redwood City*,	Civil Eng.
Coleman, Edgar Park,	*Decatur, Ill.*,	Mechanical Eng.
Collins, Samuel Wilson,	*Graham, Mo.*,	Physics
Conners, George Wilbert,	*Santa Rosa*,	Civil Eng.
Cooley, Frederic Allen,	*Seymour, Ind.*,	Mathematics
Cornell, Ivan Robb,	*Portland, Or.*,	English
Cory, Henry Manning,	*Fresno*,	Chemistry
Cory, Mabel,	*Fresno*,	English
Cotton, Aylett Rains, Jr.,	*San Francisco*,	History
Cowles, Rheinart P,	*Los Angeles*,	Mechanical Eng.
Crane, Edgar Willis,	*Riverside*,	Mechanical Eng.
Crosett, James Haven,	*San Francisco*,	Civil Eng.
Crothers, George Edward,	*San Jose*,	History
Crothers, Thomas Graham,	*San Jose*,	History
Crothers, William Henry,	*San Jose*,	French
Crowell, Robinson,	*San Francisco*,	Mechanical Eng.
Cuddeback, Allan Winter,	*Cuddebackville, N. Y.*,	Civil Eng.
Dalzell, Charles,	*Wiota, Iowa*,	English
Davis, Bradley Moore,	*Chicago, Ill.*,	Botany
Deming, Horace Volney,	*San Francisco*,	English
Dennis, Francis James,	*Nevada City*,	Philosophy
Dickey, Alfred Emil,	*Jamestown, N. D.*,	Latin
Doane, Rennie Wilbur,	*Pasadena*,	Civil Eng.
Dodson, Shelby Martin,	*Santa Clara*,	Mathematics
Dole, Marion Foster,	*Riverside*,	Physiology
Doub, William Coligny,	*Ottawa, Kan.*,	History
Downing, Paul Milton,	*Pleasanton*,	Civil Eng.
Downing, Claude Standish,	*Pleasanton*,	Civil Eng.
Doyle, Edmund Miller,	*Menlo Park*,	Mechanical Eng.
Drake, Robert Morris,	*Portland, Or.*,	Civil Eng.
Dray, Frank R,	*Sacramento*,	Chemistry
Durrant, William H Theodore,	*Toronto, Canada*,	Civil Eng.
Durrell, Carleton Edgar,	*Pasadena*,	Mechanical Eng.
Eastman, Walter Frederick,	*Oakland*,	Mechanical Eng.
Easton, Daniel Elisha Foote,	*San Francisco*,	Latin
Eaton, Charles Frederick, Jr.,	*Santa Barbara*,	Mechanical Eng.
Eaves, Lucile,	*Eugene, Or.*	English

Eckley, Carroll Orrin,	*Brandon, Vt.*,	Mechanical Eng.
Edwards, James Rufus,	*Santa Rosa*,	English
Edwards, Wilber James,	*San Jose*,	Civil Eng.
Ellery, Nathaniel,	*Eureka*,	Civil Eng.
Elmore, Jefferson,	*Madera*,	Latin
Ely, Le Roy D,	*Pasadena*,	Civil Eng.
Entler, Frank Lamond,	*Chico*,	Civil Eng.
Evans, Katherine Florence,	*Evansville, Ind.*,	Mathematics
Ewell, Edwin Chapin,	*Sonoma*,	Philosophy
Faris, Wallace Somerville,	*San Francisco*,	Economics
Field, Charles Kellogg,	*Alameda*,	English
Fife, Charles Andrew,	*Pasadena*,	Chemistry
Fitzgerald, James Joseph,	*Stockton*,	English
Fogg, Frederick Seydel,	*Tacoma, Wash.*,	German
Fowler, Joseph,	*Duarte*,	Mathematics
Frankenfield, Budd Doble,	*Los Angeles*,	Mechanical Eng.
Fraser, Alfred Parker,	*Stockton*,	Civil Eng.
Frink, Egbert,	*Seattle, Wash.*,	Mathematics
Fry, Donald Hume,	*Vancouver, B. C.*,	Mechanical Eng.
Fyffe, Harriet J,	*Normal, Ill.*,	English
Garretson, Sarah Jane,	*Pendleton, Ind.*,	Mathematics
Germain, Frank,	*Winnemucca, Nev.*,	Mathematics
Gifford, John Sherman,	*Orleans, Ind.*,	History
Gilmore, Lucien Howard,	*Capron, Ill.*,	Mechanical Eng.
Glidden, Cora Louisa,	*De Kalb, Ill.*,	Physiology
Goodbody, Louise Anne,	*Gainesville, N. Y.*,	English
Greene, Charles Wilson,	*Ireland, Ind.*,	Physiology
Gregg, Josephine,	*San Luis Obispo*,	English
Gregg, Paul Mills,	*San Luis Obispo*,	English
Griffin, Jesse Richard,	*Oakdale*,	Economics
Grosh, Milton David,	*San Francisco*,	Mechanical Eng.
Gruwell, Robert Lyon,	*Lower Lake*,	History
Guilbert, Kate,	*San Jose*,	English
Gunn, James Alexander, Jr.,	*Kelseyville*,	English
Guppy, Christine Mary,	*San Jose*,	Latin
Guppy, Mabel F,	*San Jose*,	Latin
Hadley, Fred Harlan,	*Tulare*,	Physiology
Haecker, Franklin Gottlieb,	*Domestic, Ind.*,	English
Hall, Myron Dorman,	*Alamo*,	Mechanical Eng.
Hamilton, Ernest G,	*Riverside*,	Civil Eng.
Hamilton, William H,	*San Francisco*,	Latin
Hampson, William B,	*Three Springs, Pa.*,	Mechan'l Eng.

Harelson, William Hasting,	*Tulare*,	Civil Eng.
Harris, Norman Lee,	*South Bend, Ind.*,	Mechanical Eng.
Harter, Ralph Laban,	*San Jose*,	Civil Eng.
Hartley, Flora,	*Yankeetown, Ind.*,	Zoology
Harwood, Henry,	*Louisville, Ky.*,	Chemistry
Haven, Mattie Elizabeth,	*Oakland*,	English
Hawxhurst, Robert, Jr.,	*San Francisco*,	Civil Eng.
Hayward, Ernest Cheeney,	*Victoria, B. C.*,	Mathematics
Hazzard, William Clarence,	*Claquato, Wash.*,	History
Hentrich, Bernardine,	*San Francisco*,	English
Hentrich, Margaretta,	*San Francisco*,	French
Herrick, Jane Powers,	*Sacramento*,	Latin
Herrick, Kate,	*Sacramento*,	Latin
Hetherington, Clark Wilson,	*San Diego*,	Chemistry
Hidden, Edward Trenholm,	*Vancouver, Wash.*,	English
Hidden, Maurice Jackson,	*Vancouver, Wash.*,	English
Hidden, William Foster,	*Vancouver, Wash.*,	Mathematics
Hill, Ernest Rice,	*Montalvo*,	Civil Eng.
Hogg, Charles Henry,	*Saratoga*,	History
Hogg, Cora E,	*Saratoga*,	Latin
Holsclaw, Florence Mabel,	*Gilroy*,	Physiology
Hoover, Herbert C,	*West Branch, Ia.*,	Mechanical Eng.
Hopkins, Owen Griffith,	*Sacramento*,	English
Houghton, Charles Edwin,	*Philadelphia, Pa.*,	Mechanical Eng.
Howard, Ella Lowe,	*Indianapolis, Ind.*,	English
Howell, Harriet,	*Los Gatos*,	English
Huff, Frank Lester,	*Mountain View*,	History
Huff, William Ellsworth,	*Mountain View*,	Civil Eng.
Hughes, Charles Colfax,	*Redwood City*,	English
Hulst, John,	*Grand Rapids, Mich.*,	Mech'l Eng.
Hunt, Harry Edward,	*Santa Ana*,	English
Husted, Ralph Allen,	*Saratoga*,	Latin
Hyde, Mary Elizabeth,	*Santa Clara*,	German
Hyde, Walter Spalding,	*San Francisco*,	Mechanical Eng.
Irelan, Oscar Burgess,	*San Francisco*,	Mechanical Eng.
Jenness, Charles Kelley,	*West Epping, N. H.*,	English
Jenness, James Freeman,	*West Epping, N. H.*,	English
Jewett, Russell McIntosh,	*Oakland*,	Mechanical Eng.
Johnson, Balfe De Vose,	*Oregon City, Or.*,	Mechanical Eng.
Johnson, Ernest Huston,	*Sacramento*,	Latin
Johnson, Nello De Vose,	*Oregon City, Or.*,	English
Jones, Albert Lincoln,	*San Jose*,	Mathematics

Jones, Maud Bessie,	*Sacramento*,	English
Kaetzel, Charles Paul,	*San Luis Obispo*,	English
Kiefer, Hugo Albert,	*Los Angeles*,	Physiology
Kenower, Sanford K,	*Huntington, Ind.*,	Mechanical Eng.
Kimball, Edwin Boyce,	*Haywards*,	Mining Eng.
Kincaid, Archer,	*Redwood City*,	History
King, Henry Lane,	*Atchison, Kan.*,	Civil Eng.
King, Percy Libby,	*Sonoma*,	Physiology
Kirkbride, Walter Harold,	*Redwood City*,	Civil Eng.
Knox, Newton Booth,	*Sacramento*,	Electrical Eng.
Kokubo, Sadanosuke,	*Nagoya, Japan*,	Greek
Laguna, Bertha de,	*Oakland*,	English
Langford, James Terry,	*Lodi*,	Mechanical Eng.
Lawrence, Albert Hume,	*Los Gatos*,	Civil Eng.
Lawrence, George Alfred,	*Los Gatos*,	Physiology
Leadbetter, Horace Martin,	*Stockton*,	Civil Eng.
Leithold, Christian Ferdinand,	*Postville, Iowa*,	Electrical Eng.
Lewis, Ernest Dorman,	*Evansville, Ind.*,	History
Liliencrantz, Edith Eleanor,	*San Francisco*,	Physiology
Longley, John Artemas,	*Mountain View*,	History
Longley, Mary Emily,	*Mountain View*,	History
Love, Flora,	*Newtown, Ind.*,	English
Luman, William Eugene,	*Santa Rosa*,	English
Lyle, Annie Galloway,	*San Francisco*,	English
Lyman, Edmund Rensselaer,	*Salt Lake City, Utah*,	Chemistry
McDaniels, John Henry,	*Tacoma, Wash.*,	German
McFarland, Robert Daremas,	*San Jose*,	English
Mabury, Bella,	*San Jose*,	English
Mabury, Eugenia,	*San Jose*,	English
Mackintosh, Kenneth,	*Seattle, Wash.*,	English
Macrum, John Wilson,	*Portland, Or.*,	German
Magee, Chester Lea,	*San Diego*,	Mathematics
Magee, Ernest De Los,	*San Diego*,	History
Maguire, William Michael,	*San Francisco*,	English
Manahan, Roland Harry,	*Pasadena*,	Electrical Eng.
Mano, Hatsuwo,	*Tokio, Japan*,	Chemistry
Mansfield, Thomas Drummond,	*Nipomo*,	Mathematics
Marsh, Olive Whitefield,	*Santa Cruz*,	English
Maynard, Rea Edwards,	*Los Angeles*,	Mechanical Eng.
Merritt, Alberta Lois,	*Woodland*,	English
Messinger, Victor Emery,	*Phoenix, A. T.*,	Greek
Metcalf, John Nuckolls,	*San Diego*,	History

Miller, Cyrus Robinson,	*Sacramento*,	Chemistry
Miller, George B,	*Kokomo, Ind.*,	Mathematics
Misaki, Seizo,	*San Francisco*,	Mechanical Eng.
Morgan, Raymond Charles,	*Knightstown, Ind.*,	Civil Eng.
Morrow, Howard,	*San Francisco*,	English
Morton, Oliver Perry,	*San Francisco*,	English
Moulton, William Brooks,	*New Whatcom, Wash.*,	History
Murphy, Daniel William,	*Butler, Ind.*,	Physics
Murray, Edward Norman,	*Tacoma, Wash.*,	Mathematics
Newell, James Blair,	*Santa Clara*,	Greek
Newman, Charles James,	*St. Helena*,	History
Nicholson, Francis John,	*Victoria, B. C.*,	Zoology
Nicholson, Watson,	*Pendleton, Ind.*,	History
Norton, Arthur Lauren,	*Lodi*,	History
Nowell, John A,	*College Park*,	History
O'Brien, Maurice William, Jr.,	*San Jose*,	Mechanical Eng.
Offield, Lorenzo Adolphus,	*Santa Clara*,	Greek
Orvis, Ralph Thompson,	*San Jose*,	Physiology
Otaki, Keinosuke,	*Tokio, Japan*,	Zoology
Painter, Edward Emlen,	*San Francisco*,	Civil Eng.
Patterson, Fred,	*San Jose*,	Economics
Penniman, Bessie Morris,	*Oakland*,	Latin
Peters, Louise,	*Terra Haute, Ind.*,	English
Pieper, Oscar Henry,	*San Jose*,	Electrical Eng.
Pierce, Henry Fisher,	*Milton, Or.*,	Philosophy
Pinkham, Charles B,	*Sacramento*,	German
Pollock, Alfred Hermann,	*Hamburg, Germany*,	Agriculture
Porter, D'Arcy Alan,	*Salinas*,	Civil Eng.
Potter, Clarence Denver,	*Oakland*,	English
Powell, Arthur Edward,	*Stockton*,	Civil Eng.
Pressley, Lawrence Adams,	*Santa Rosa*,	Mathematics
Reilay, Luella May,	*Oakland*,	Mathematics
Reynolds, Florence,	*Los Angeles*,	English
Rice, Archie Birmingham,	*Santa Barbara*,	English
Rich, Ellsworth Lincoln,	*San Jose*,	Greek
Richards, Virgil Chesley,	*College Park*,	History
Rose, Walter Malins,	*Ontario*,	History
Rosendale, Charles Edward Barry,	*San Francisco*,	Latin
Rosenfeld, Max Lee,	*San Francisco*,	Civil Eng.
Rossiter, Janette Hall,	*Sheridan, Mont.*,	German
Roussel, Louise Mathilde,	*Ocean View*,	English
Roussel, Victoria Elizabeth,	*Ocean View*,	English

Ruddell, Almus Goar,	*San Jose*,	English
Russell, Tracy George,	*San Francisco*,	Physiology
Schmidt, Alfred Francis William,	*Turner, Or.*,	Greek
Schopbach, Lenora,	*Pasadena*,	English
Searles, Dennis,	*Mojave*,	Mechanical Eng.
Shaw, Walter Robert,	*Moline, Ill.*	Botany
Sheehan, John Francis, Jr.,	*San Francisco*,	English
Shelley, Elsie Hjerleid,	*Berryessa*,	Physiology
Siebenthal, Claude Ellsworth,	*Bloomington, Ind.*,	Geology
Simmons, Samuel Ewer,	*Sacramento*,	Chemistry
Sloan, James Edward,	*Mayfield*,	Greek
Slusser, Helen Agnes,	*San Miguel*,	Physiology
Small, Harvey Bradstreet,	*Dulzura*,	Mining Eng.
Smith, Alfred Augustus,	*Astoria, Or.*,	Mathematics
Smith, Carl Schurz,	*Eugene, Or.*,	History
Smith, Charles Howard,	*San Francisco*,	Mechanical Eng.
Smith, Grace Ethel,	*San Francisco*,	English
Smith, Lewis Howell,	*Fresno*,	English
Smith, Walter Olcott,	*Detroit, Mich.*,	History
Soper, Harleigh Frederic,	*San Francisco*,	English
Stadtmuller, Henrietta Louise,	*San Francisco*,	English
Stafford, Walter Alfred,	*Santa Ana*,	Civil Eng.
Stearns, Herman De Clercq,	*Joliet, Ill.*,	Physics
Steffens, Lottie,	*Sacramento*,	English
Stinson, Maude Evangeline,	*San Jose*,	English
Stoddard, Charles Harvey,	*San Jacinto*,	Mechanical Eng.
Stuart, William Elder,	*San Francisco*,	Civil Eng.
Swain, Fannie Morgan,	*Palo Alto*,	Mathematics
Talbot, Mary Alice,	*Tulare*,	German
Thaxter, Harry Clinton,	*Carson City, Nev.*,	Mathematics
Thomas, Carl Clapp,	*Pasadena*,	Electrical Eng.
Thompson, John West,	*Redwood City*,	Mechanical Eng.
Thompson, M Roy,	*Tacoma, Wash.*,	Civil Eng.
Thompson, Walter Oregon,	*Modesto*,	Chemistry
Tilden, Heber Cady,	*San Francisco*,	English
Timm, Henry R,	*Dixon*,	German
Tregloan, John Roger Beecher,	*Amador City*,	Civil Eng.
Trumbo, Howard Thompson,	*San Francisco*,	Economics
Unruh, David Spencer,	*Arcadia*,	Civil Eng.
Van Denburgh, John,	*Los Gatos*,	Zoology
Vogel, Olivia Rose,	*Fresno*,	English
Vostrovsky, Clara,	*San Jose*,	Botany

Wallingford, John Duvall,	*Greensburg, Ind.,*	Economics
Wallis, Daniel Webster,	*Eugene, Or.,*	Mechanical Eng.
Washburn, Jessica Thompson,	*San Jose,*	English
Watson, Charles E,	*San Francisco,*	Mining Eng.
Watson, Thomas Sidney,	*Spokane, Wash.,*	Civil Eng.
Weber, Anna Matilda,	*Buffalo, N. Y.,*	Latin
Webster, William Leander,	*San Jose,*	History
Wheeler, Richmond,	*Albany, Or.,*	Latin
White, Arthur Hain,	*Live Oak,*	Mathematics
Whittemore, John Reboul,	*St. Louis, Mo.,*	Mechanical Eng.
Whittier, Clarke Butler,	*Riverside,*	History
Wight, John Kinlay,	*Toronto, Can.,*	History
Wigle, Britton Day,	*Mayfield,*	History
Wigle, Elsie Alice,	*Mayfield,*	English
Wigle, Gilbert Griffin,	*Mayfield,*	History
Wilcox, Edith,	*San Jose,*	French
Williams, Elmer Boyce,	*San Jose,*	History
Williams, Fred Steele,	*Salem, Or.,*	English
Williams, Horace Elbert,	*Fayetteville, Ark.,*	Geology
Wilson, Allan Kay,	*San Francisco,*	Mining Eng.
Wilson, James Fyffe,	*Mt. Palatine, Ill.,*	History
Wilson, James Miles,	*Dallas, Or.,*	Electrical Eng.
Wood, Jessie Palen,	*San Jose,*	English
Wood, Nelle,	*Atlantic, Ia.,*	History
Wood, Oscar Baylies,	*Cupertino,*	Mechanical Eng.
Woodworth, George Lyman,	*St. Louis, Mo.,*	Electrical Eng.
Woolrich, Arthur G,	*San Francisco,*	Civil Eng.
Wootten, Frank Bivins,	*Linden,*	Greek
Wright, Max Goethe,	*Grand Rapids, Mich.,*	Elec. Eng.
Wright, Samuel Vaughan,	*San Luis Obispo,*	English
Yoder, Minnie Brooks,	*Des Moines, Ia.,*	Chemistry
Yoell, Herbert Alexander,	*San Jose,*	Greek
Zane, Franklin Andrew,	*Salt Lake City, Utah,*	History
Zion, Edwin Ray,	*Berkeley,*	Economics
Zumwalt, Don John,	*College Park,*	Civil Eng.

SPECIAL AND PARTIAL STUDENTS.

Abbott, Frank Brown,	*Mountain View*,	Physiology
Adams, Edward Thomas,	*San Francisco*,	Mechanical Eng.
Albrecht, Richard Theodore,	*Fruitvale* (*Alameda*),	Civil Eng.
Andrade, Frank,	*Honolulu, H. I.*,	Civil Eng.
Balis, Newton B,	*Red Bluff*,	Civil Eng.
Barker, Albert Charles,	*Menlo Park*,	Chemistry
Barnes, Henry Augustine,	*Philadelphia, Pa.*,	Mechanical Eng.
Boring, Oramanda,	*Wynola*,	Zoology
Boutelle, Harry Moss,	*Fort Custer, Mon.*,	Mechanical Eng.
Boots, William, Jr.,	*Milpitas*,	Chemistry
Briggs, Evelyn,	*Sacramento*,	Chemistry
Brothers, Carrie Regina,	*Sacramento*,	English
Brun, Justine Anna,	*San Jose*,	English
Carter, Arthur Nathaniel,	*Sierra Madre*,	Mechanical Eng.
Castro, Andrew Roque,	*Mountain View*,	Physiology
Chamberlain, Will Hunt,	*San Francisco*,	English
Chamberlin, Willis Perronet,	*Oakland*,	English
Chapman, Edwin Newton,	*Alameda*,	English
Chapman, Lizzie Corinne,	*Oakland*,	English
Cloud, Nellie Ada,	*Redwood City*,	English
Cole, Frank Lorenzo,	*Whatcom, Wash.*,	Civil Eng.
Collier, Sarah Bell,	*Lakeport*,	English
Cory, Susanna,	*San Jose*,	English
Couse, Della Fulton,	*Winona, Minn.*,	English
Cox, Harry James,	*Petaluma*,	Chemistry
Coxhead, Edith Maie,	*Oakland*,	English
Crosby, Edward Oscar,	*Alameda*,	Mechanical Eng.
Culver, Julia Louise,	*Oakland*,	English
Cuthbertson, George Washington,	*Manchester*,	Mechanical Eng.
Daly, Louise Gregoria,	*Mayfield*,	Freehand Drawing
Diggles, James Arthur,	*Ft. Jones*,	Civil Eng.
Dodge, Charles Elsworth,	*University P. O.*,	Mechanical Eng.
Donahoo, Emery Allen,	*San Francisco*,	Mechanical Eng.
Donald, Robert L'Amy,	*Dundee, Scotland*,	Civil Eng.
Doty, Frank Carlton,	*Hastings, Neb.*,	History
Elsemore, William Cyrus,	*Eureka*,	Civil Eng.
Estabrook, Fannie May,	*San Jose*,	English
Estes, Hattie Bell,	*Webster City, Iowa*,	English

Evans, Caroline Hornbrook,	*Evansville, Ind.*,	English
Fanning, William Augustine,	*Ypsilanti, Mich.*,	English
Farmer, Elmer Elsworth,	*Vacaville*,	Civil Eng.
Fernald, Charles Anselm,	*Santa Barbara*,	Chemistry
Field, Martin,	*Alameda*,	Civil Eng.
Folsom, Myron Arlie,	*Alexandria, S. Dak.*,	German
Gale, Edward Nuckols,	*Memphis, Mo.*,	German
Gamble, Marian Stewart,	*Garberville*,	English
Gardner, George Montgomery,	*Carson, Nev.*,	Physiology
Geer, Albert Warren,	*Alum Creek, Ohio*,	Mechanical Eng.
Gilbert, Roy Merrill,	*Colton*,	Education
Goodman, Albert,	*Portland, Or.*,	Chemistry
Gray, Harry Paul,	*Milwaukee, Wis.*,	Mechanical Eng.
Guilbert, Victoria,	*San Jose*,	French
Hargreaves, George,	*Bronxville, N. Y.*,	Electrical Eng.
Harris, Henry,	*Olympia, Wash.*,	Chemistry
Hartman, Fred A,	*San Francisco*,	English
Haven, Lucie Gates de,	*San Francisco*,	Chemistry
Heiner, Lawrence Andrew,	*Redwood City*,	Mechanical Eng.
Holman, Elmer Anderson,	*Anaheim*,	Civil Eng.
Holsclaw, Grace Evelyn,	*Gilroy*,	Latin
Hughes, Frances,	*Redwood City*,	English
Jack, Francis Joseph,	*Decatur, Ill.*,	Economics
Kautz, Austin,	*Vancouver, Wash.*,	Mathematics
Kirkpatrick, Christine May,	*San Jose*,	History
Krauss, Fred G,	*Calistoga*,	Mechanical Eng.
Kusano, Katsumi,	*Tokio, Japan*,	English
Ladd, Laura Louise,	*Vacaville*,	English
Laguna, Laura Frederica de,	*Oakland*,	French
Langille, Herbert Bamford,	*Hood River, Or.*,	Mechanical Eng.
La Page, Gertrude,	*Oroville*,	English
Lewis, John Mellgren,	*Oakland*,	History
Luce, Grace Adelaide,	*San Diego*,	English
McCampbell, Marguerite,	*Henleyville*,	Education
McCann, William Dougherty,	*Santa Cruz*,	Architecture
McCollum, Jennie Frances,	*Gervais, Or.*,	English
MacCormac, John William,	*Astoria, Or.*,	English
McGuire, William Betton, Jr.,	*Auburn*,	Civil Eng.
McGuire, William Lewis,	*Hanford*,	Civil Eng.
Macrum, Newell,	*Portland, Or.*,	History
Madden, Patrick Sarsfield,	*Eureka*,	English
Makeever, Merton Forrest,	*Marseilles, Ill.*,	Electrical Eng.

Marble, John Emerson,	*Los Angeles,*	Zoology
Maxwell, William Lindsay,	*Sonora,*	Mechanical Eng.
Moulton, Seba,	*New Whatcom, Wash.,*	English
Murray, William Bayliss,	*Tacoma, Wash.,*	Civil Eng.
Neidig, William Jonathan,	*Los Angeles,*	English
Nelk, Carl Nicholas,	*Williams,*	Mechanical Eng.
Nowell, Emily A,	*College Park,*	English
O'Brien, Frank Charles,	*San Francisco,*	Mechanical Eng.
Orcutt, William Warren,	*Santa Paula,*	Civil Eng.
Owens, James A,	*San Francisco,*	Civil Eng.
Packard, Mabel Blanch,	*San Diego,*	English
Patterson, Clyde Llewlylen,	*Eugene, Or.,*	Mechanical Eng.
Perrault, Alfred Frank,	*Dayton, Minn.,*	Chemistry
Pillsbury, Ernest Sargent,	*Auburn,*	Physiology
Pomeroy, Thomas Henry,	*Oswego, Or.,*	Mechanical Eng.
Potter, Winfred White,	*San Francisco,*	Mathematics
Purdue, Albert Homer,	*Yankeetown, Ind.,*	Geology
Quelle, Julius A,	*L. I. City, N. Y.,*	Civil Eng.
Roessler, George Emil,	*Modesto,*	Mathematics
Sage, William Havland,	*Olean, N. Y.,*	Chemistry
Sargent, Agnes,	*Sargents,*	French
Sawyer, Houghton,	*San Francisco,*	Chemistry
Schuyler, Wilton Sumner,	*Oceanside,*	Mechanical Eng.
Smith, George Lincoln	*New Bedford, Moss.,*	History
Snowden, Paul Ward,	*San Jose,*	Economics
Southwick, Edmund Carmed,	*Mayfield,*	Physiology
Stratton, George Draper,	*Riverside,*	Civil Eng.
Takechi, Norio,	*Tora, Japan,*	Economics
Tennyson, Howard A,	*San Jose,*	Mechanical Eng.
Thoits, Willis Clifford,	*Nipomo,*	Chemistry
Trotter, Frederick Eugene,	*Vancouver, Wash.,*	Zoology
Watson, Frank M,	*San Jose,*	Electrical Eng.
Wells, Hattie Brewer,	*Campbell,*	English
Wheeler, Mae Emeline,	*Riverside,*	English
White, James Corbett,	*Honolulu, H. I.,*	Civil Eng.
White, John Wesley,	*Oakland,*	Civil Eng.
Wilson, John Henry,	*Honolulu, H. I.,*	Civil Eng.
Winship, Walter Edward,	*San Diego,*	Mathematics
Woodburn, Nettis Eudora,	*San Diego,*	English
Young, William George,	*San Diego,*	English

SUMMARIES.

BY CLASSES.

Graduates,	29
Undergraduates,	341
Special and Partial Students,	120
Total (men, 380; women, 110),	490

BY MAJOR SUBJECTS.

	Graduates.	Undergraduates.	Specials.	Total.
Greek,	—	11	—	11
Latin,	6	18	1	25
German,	0	9	2	11
French,	1	4	3	8
English,	4	87	34	125
Philosophy,	2	3	—	5
Education,	3	—	2	5
History,	2	36	5	43
Economics,	—	8	3	11
Mathematics,	2	24	4	30
Physics,	2	3	—	5
Chemistry,	—	11	12	23
Botany,	—	3	—	3
Physiology,	—	18	5	23
Zoology,	1	4	3	8
Geology,	5	2	1	8
Agriculture,	—	1	—	1
Architecture,	—	1	1	2
Freehand Drawing,	1	—	1	2
Mining Engineering,	—	5	—	5
Civil Engineering,	—	43	20	63
Mechanical Engineering,	—	38	20	58
Electrical Engineering,	—	12	3	15

BY RESIDENCES.

California,	329	Arkansas,	1
Indiana,	33	Colorado,	1
Oregon,	21	Kentucky,	1
Washington,	21	Maine,	1
Illinois,	10	Nebraska,	1
Iowa,	9	New Jersey,	1
New York,	8	North Dakota,	1
Nevada,	6	Ohio,	1
Michigan,	4	South Dakota,	1
Missouri,	4	Vermont,	1
Minnesota,	3	Wisconsin,	1
Utah	3	Canada,	5
Pennsylvania,	3	Japan,	5
Kansas,	2	Hawaiian Islands,	3
Massachusetts,	2	Germany,	1
Montana,	2	Ireland,	1
New Hampshire,	2	Scotland,	1
Arizona,	1		
Total,			490

CALIFORNIA BY COUNTIES.

Alameda,	29	San Francisco,	52
Amador,	1	San Joaquin,	9
Butte,	2	San Luis Obispo,	7
Colusa,	1	San Mateo,	10
Contra Costa,	1	Santa Barbara,	3
Fresno,	5	Santa Clara,	94
Humboldt,	4	Santa Cruz,	5
Kern,	1	Solano,	3
Lake,	3	Sonoma,	8
Los Angeles,	21	Sonora,	1
Mendocino,	1	Siskiyou,	1
Monterey,	2	Stanislaus,	3
Napa,	2	Sutter,	1
Nevada,	2	Tehama,	3
Orange,	3	Tulare,	5
Placer,	2	Tuolumne,	1
Sacramento,	14	Ventura,	2
San Bernardino,	12	Yolo,	2
San Diego,	13		